

# CONCEPT DESIGN

WORKS FROM SEVEN LOS ANGELES ENTERTAINMENT DESIGNERS

foreword by FRANCIS FORD COPPOLA



H.BELKER S.BURG J.CLYNE M.GOERNER N.PAGE N.PUGH S.ROBERTSON

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DEDICATION

To all of you who choose to dream, draw, paint and use your imagination....

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## FOREWORD

In every form of artistic expression there is passion, and a need to tell a story, convey an idea, or project an ideal. To be in a position to express these concepts and have the tools and foresight to communicate parallel to, or beyond one's vision, is the goal of every artist. It is in the drive of the artist where the vision receives a soul, and in the manipulation of materials where it acquires a body.

Society is often measured by the level of sophistication captured in its artistic expression, and can serve as the scale from which its path is plotted. This quest to keep moving forward, not content to rest too long in the imagery and visions of those before, is what keeps the wheels of innovation and collective development spinning. It is a course that while fanning and extending outward like the branches of an immense tree always has roots referring back to its origin.

The visions of worlds, tools, spaces, and methods of conveyance not yet known, are all part of the internal dialogue of the concept artist. It is this ability to step outside of one's present condition and provide a voice to the hypothetical future that places them in a distinct position; one where their understanding of technology, expression of art and method of communication result in the objects and environments that provide influence on modern societies' daily experience. In the end, art's role is not to be amusing either for the artist or the audience...it's to interpret life, in the past, the present—and the future.



Francis Ford Coppola

## INTRODUCTION

In the spring of 2001 I lost my father to cancer. He was and still is very important to me. At his funeral services I witnessed an amazing outpouring of affection for him from his many artist friends and family who had traveled from faraway places to say good-bye. In the last months of his life he had spoken to me often about a collective spirit he believed in—one in which all of his interactions with others would be remembered by those people and his spirit would live on in their memories of him. Several months after his death I was reflecting back and came to appreciate more fully all that he had done for me and for his friends. I stepped back from my own life to observe my friendships. I had a few very close friends but I thought that maybe, even in the middle of Los Angeles, I could start something that might build into a rewarding shared experience for more of my friends.

I fondly remember the creative energy and freedom my friends and I had while we were attending Art Center College of Design. I thought to myself it would be great to do work in that type of environment again—surrounded by friends striving toward a common goal, inspiring and competing with each other to push our skills and visions to new levels. So from this memory, and a desire to build new friendships and revive old ones, I proposed the idea of this book.

The original idea went something like this: a group of friends meet every other month and share with each other two original pieces of concept art each had created outside of their normal jobs. At the end of a year's time I would launch a small publishing company to publish and sell our first book, *Concept Design*. The project went well—we all made time in the evenings and on the weekends to explore new ideas and artistic techniques. That's not to say that there wasn't a mad rush at the end to try to wrap up our images and text. It was now exactly as school had been...all-nighters included!

The majority of the color artwork in this book was created with digital brushes, as opposed to traditional ones. Most of us have found that the flexibility and speed of working digitally helps us to communicate our design ideas more easily. Adobe Photoshop is the software of choice. There are a few examples of traditional media work and other software programs throughout, but the bulk of the work was painted within Photoshop 6.0 and 7.0. We hope that by sharing with you our experiences and ideas we might inspire you to create images of your own. Immediately following this introduction you will see one example spread from each of the seven designers. This will give you a quick feel for the range of work we have created. After the first seven spreads the book is organized by designer. Each designer's chapter leads off with a brief biography before you view his work.

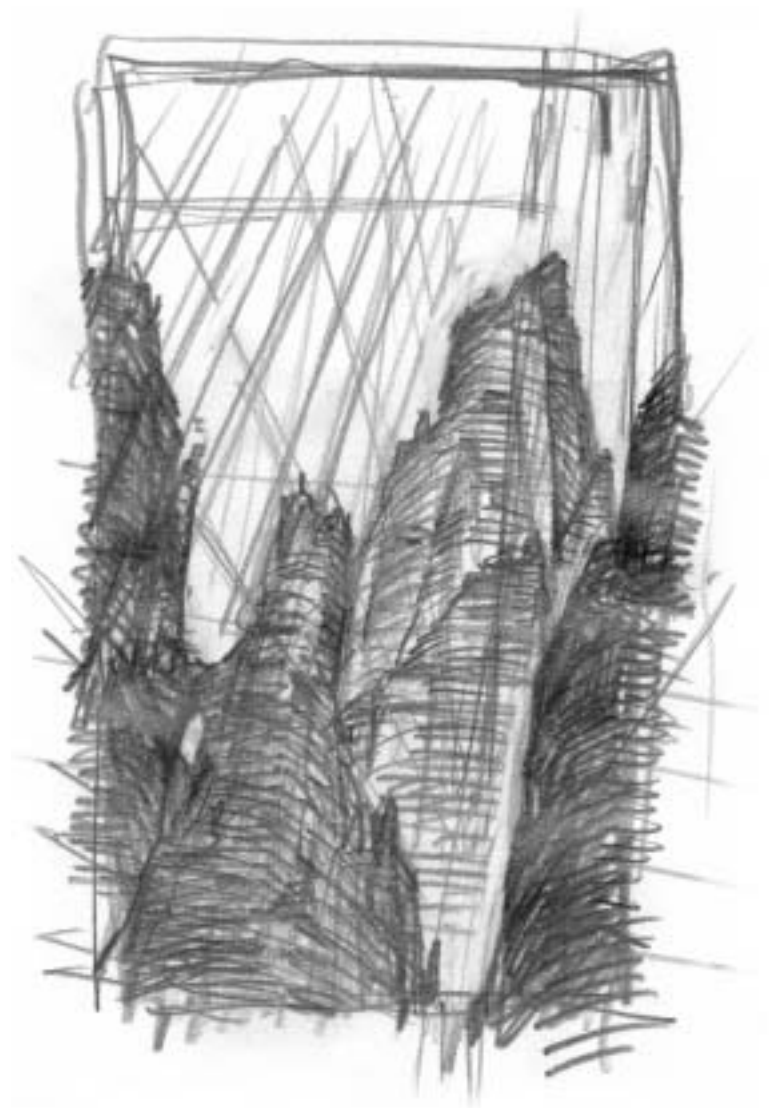


We hope that you enjoy the works within.

Special thanks to all of you who have helped us make this book a reality. And to my friends, old and new, you will always live on in my memories.

Scott Robertson  
Autumn 2002





JAMES CLYNE:

## LOST CITY

Large abandoned structures such as vacant factories and mills, decommissioned ship loaders, and dilapidated train yards have always fascinated me, probably originating from my appreciation of artists like Giovanni Piranesi and Hugh Ferriss. To me they imply a mysterious, unknown narrative. This image is from the perspective of a traveler who is discovering this lost city for the first time.

I first sketched out my composition using graphite pencil on newsprint to establish the point of view and perspective. I then scanned it into the computer, and rendered in Photoshop using custom brushes combined with texture overlays. Using a Wacom tablet and pen, I was able to keep the image loose and sketchy by drawing on top of composited textures and color tones that I had blocked in. I restricted my color palette to dark earth tones to give it a sense of abandonment and neglect.







NEVILLE PAGE:

## TO SERVE IT UP AND PROTECT

Having been one of the designers of the Jet Pack for the police officers in “Minority Report,” I wanted to take another crack at it, yet with a tongue-in-cheek approach (clearly more cheek than tongue). Obviously, one would set their hind parts alight with this jet pack design. It is safe to say that with police officers like her, one might be inspired to commit crimes in the hopes of being arrested. So perhaps this is not such a good costume idea after all.

From a design standpoint, I thought that it might be novel to include additional propulsion units on her hands and feet to facilitate greater maneuverability. You might be wondering though, “What if your nose has an itch?” The

answer...“you’ll never have to scratch it again.”

From a rendering standpoint, this was an exercise in “shiny” with minimal effort. The shape of the pants was blocked in as solid black. With “preserve transparency” on, I then rendered the form as if it were a totally matte finish using the airbrush and dark grey. Then I painted a black reflection and added two simple spotlight reflections. This was really all it took to get the wet look, but the other reflections do help to reinforce the effect.



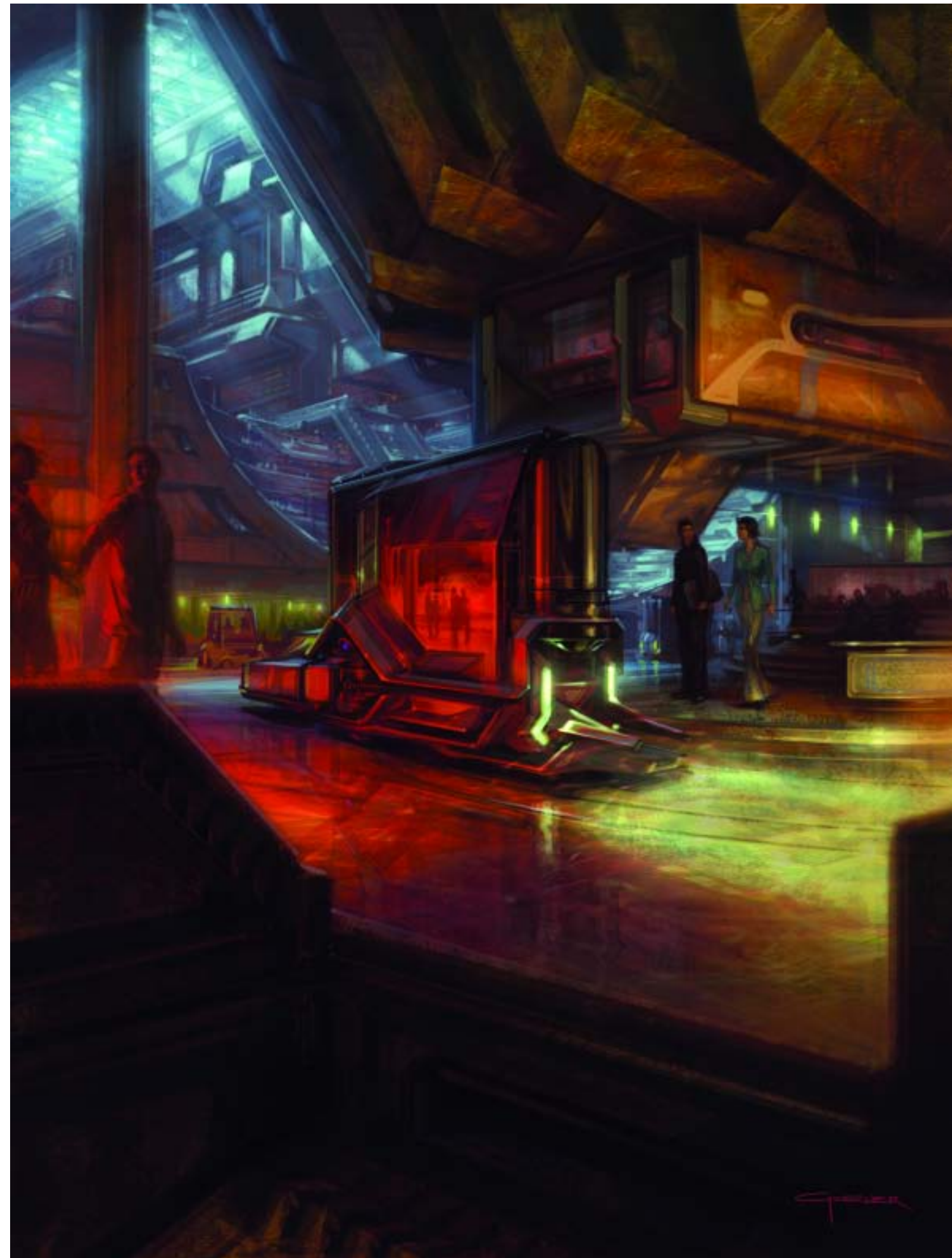


MARK GOERNER:

This was one of the last pieces I did for the book. It was driven by discussions in the group that there were almost no interiors done at that point. So from that, I combined the design of a vehicle I had started doodling, with an interior that could complement it. The interior was originally going to be a very simple and less expansive space, but as it started evolving at the midway point, it seemed natural to make the scale gigantic. The inspiration for the layout came from the fleets of illustrated car ads done in the fifties and sixties. I wanted to take one of those idyllic scenarios, and drop it into a sort of, space station mega-mall environment, playing with some unusual and juxtaposed forms, giving it a bit of a nightclub atmosphere.

The technique of this rendering, like some of the others, was done by scanning in a small thumbnail sketch, roughing in the colors, and then printing, sketching again, and then rescanning to finish painting. The process of painting was essentially laying down consecutive passes of color, one after the other, without separating foreground and background elements, until it achieved the level of contrast and detail I felt it needed to feel solid.

## ROUNDAABOUT







HARALD BELKER:

MOTOLOLA

At what point did the motorcycle become completely secondary? I started with a futuristic motorcycle that defied practicality. Then I began to focus on the attributes of the female rider. I spent too much time on the reflective bounce between the motorcycle and the pants. Don't pick apart the motorcycle design. It was a form study and nothing more.



harald belker





NICK PUGH:

## MARIN HEADLANDS, DRUMNALRIG

As we come to a deeper understanding of the nature of our environment we discover fundamentally new ways of altering the landscape around us. The current separations between architecture, landscape, products and nature are broken down as our technology allows an even blending of function and art that blurs the line between what is built and what is formed naturally. Man-made structures unfold from the earth with a grace and precision previously achieved only by organic formations. The atmosphere and the landmass are all part of the new architecture. People move freely through the environment with an intuition of a wild animal in the woods; roaming retail, work, and social regions without confusion or danger.

The surface quality of much of the designed landscape has been deliberately created to host a variety of living organisms. This allows a greater density of buildings while simultaneously creating a greater surface area on which the local ecosystem can flourish. The illusion is that of decay

but in fact the symbiotic creatures that are living on the architecture are used to minimize energy use and waste output, creating a clean elegant formation that exists in harmony with nature.

These images were conceived as line drawings on paper, scanned and painted in Photoshop. They employ extensive use of custom brushes and temp layers where oversized texture is painted orthographically, warped, scaled and projected onto the intended part of the picture creating an illusion of scale and perspective.







STEVE BURG:

The single-occupant craft depicted here rely on antigravity technology. The lozenge-shaped disks situated at the stern are containment vessels for the main power source, which is distributed to the long drive-spines located below the main fuselage. In the distance we see a fleet of airborne super-carriers—and far below a domed city is faintly visible through the haze.

This piece is yet another case of serendipity. I had only a vague notion of where I was going when I started. The image evolved from some basic 3-D shapes that were arranged and rendered as a (hopefully) dramatic composition.

Detail was gradually worked into the scene through several generations, until I arrived at the image as you see it

here. Some minor tweaks were then applied in Photoshop.

My feeling is that you have to be very careful with detail; it's easy to get sidetracked by it. As a designer, I'm very wary of imagery that presents me with a mass of detail that obscures the overall shape of the subject. For me, the primary focus is on composition, color and light. Regardless of whether the medium is 2-D or 3-D, detail is usually the last element I will introduce into an image, although it's a very necessary element in creating a finished picture—as long as everything else is working!

# THE FLIERS





SCOTT ROBERTSON:

Over the past fifteen years I have designed many production and concept bicycles for a variety of companies and myself. My professional experience with bicycle design began with the designing of advanced composite bike frames for Kestrel where I had been granted an internship between my 5th and 6th terms of study at Art Center. Since then I have continued to design frames for Kestrel and others.

During 2001 I had the good fortune of being asked to design a series of advanced concept bikes for the film “Minority Report.” The bikes were going to be ridden by extras through many of the street scenes. Twelve fully functioning futuristic bikes were built for the film but only one is seen in the finished film. If you watch really, really closely you might see it through a window for about half a second, being ridden by a newspaper delivery boy. Oh well, the designs were still very fun to do.

The bike you see here is not from the film but is an evolution of the types of bikes I had done for that project. All of

the bikes I designed were rendered in Photoshop over side view line sketches I had done. I had always wanted to do a bike rendering that had a bit more dramatic lighting and perspective to it than I usually do for typical industrial design work. What you see here is the result. I used all of the layering abilities and path functions in Photoshop to help me achieve a fairly high level of finish with this piece.

I’m sure some of you might be wondering, “How does that front wheel turn?” The way it works, in theory, is that the front fork is a kind of diamond shape when viewed from above. This allows for the front wheel to turn left and right from the center hub pivot. The front wheel is pulled left or right via a closed loop cable system that runs through the frame. Nothing on this bike is designed for efficiency or weight savings. This design exercise is all about trying to design a bike that looks interesting and new but could still be built and ridden, albeit probably not very fast!

## CRISS CROSS





# JAMES CLYNE

James Clyne was born in San Francisco and soon relocated to Oregon, spending much of his time indoors doodling and drawing everything from futuristic spaceships to imaginary environments. The “Star Wars” films undoubtedly influenced his early fascination with science fiction and dark imaginary worlds, as did the stories of J.R.R. Tolkien and C.S. Lewis, all of which fed his vivid imagination.

As a young teenager, James and his family moved to Southern California where he was drawn outdoors and spent endless hours surfing the local beaches. Unable to ignore his creativity any longer, Clyne attended the University of California at Santa Barbara where he studied Fine Art and Painting, realizing that art and design were an inescapable profession. Eager to focus on design, he attended Art Center College of Design as an Industrial Design major focusing on transportation design, product design, and entertainment design.

After earning his Bachelor of Science and graduating with honors in 1996, Clyne began his professional career designing creatures, characters, and environments for interactive gaming companies such as Sega, Activision, and Pulse Entertainment. Wanting to expand his work in entertainment design further, James began consulting as a concept artist and storyboard artist for special effects houses such as Digital Domain and Rhythm and Hues; providing conceptual designs for clients including Nike, Disney and Intel.

Since 1998, Clyne has been working in feature films, which he enjoys immensely. He has been continually challenged by the task of translating a story or script into visual environments and he enjoys the collaboration and variety of work that the film industry provides. Given the fast pace of the industry, Clyne has been constantly exploring different techniques in communicating visually and has found that the computer, and more specifically Photoshop, is the single most important tool. His early work in film began with Terry Gilliam’s “Fear and Loathing in Las Vegas.” Soon to follow were “Instinct,” “Titan A.E.,” “Mission to Mars,” “Galaxy Quest” and “Mystery Men” for which he provided the conceptual designs for environments, sets, props, matte paintings, and vehicles. All of this work was created with sketches, gouache paintings, and marker renderings, using the computer only minimally. His later work on Steven Spielberg’s “A.I.-Artificial Intelligence” and “Minority Report” was rendered completely in Photoshop. He has been working almost exclusively with the computer since, using both Photoshop and a scanner to combine sketching, painting, texture mapping and image compositing. While the computer has been indispensable in his professional work, he looks forward to setting it aside one day to pursue personal projects that allow him to revisit his neglected passion for oil painting.



JAMES CLYNE:

This image was simply an exercise in free-form computer generated drawing. I started with the idea of a basic form that I had in my head and began to express it entirely through a useful tool in Photoshop called “lasso.” By just letting the tool freely crisscross over itself, it began to create not only positive forms and shapes, but also interesting negative shapes. Initially I had intended to fully render and light the image but as I played with it I began to like the abstract graphic quality that was emerging and decided to let it be just that.

The result is a graphic abstract composition using a total of three layers within Photoshop. I restricted myself to a simple color palette and restrained from adding texture or detail. An image should always have a strong “first read”; detail can always be fleshed out later. I also originally created the image horizontally, and then when finished, I rotated it vertically because I thought that added to the abstraction.

## LASO CRAFT





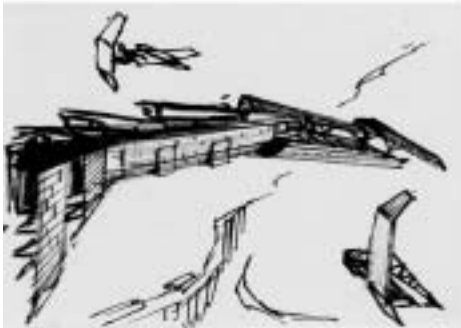
JAMES CLYNE:

I approached this image in the same way that I did the previous “Lasso Craft” image. I started with abstract two-dimensional forms to create positive and negative shapes, then I added light and shadow to the shapes to transform them into a three-dimensional form. Occasionally, I enjoy creating images like this one where I don’t have a specific outcome in my mind when I begin. My initial sketch was deliberately vague so that I could simply play with the forms and see how they would evolve as I adjusted the light and dark values. This was a helpful exercise that allowed me to design strictly by intuition, not forcing a predetermined outcome.

## LASSO STRUCTURE







JAMES CLYNE:

# HOTEL CANTILEVER

High above this riverside city, a large structure precariously stretches out from a cliff side to meet with the approaching air taxi. This community's primary energy source is supplied by the surrounding waterways and waterfalls, which provide a year-round, pollutant-free system of hydroelectric power.

My intention in this image was to explore new forms of architecture within a science-fiction context in order to create forms that are less predictable than fantasy architecture of the past.

Very little sketching on paper went into this image. The thumbnail above on the left was the one that I used as my underlay. It was a very crude and quick little sketch that I was eager to depart from and begin rendering because I already knew in my mind how I wanted the image to look.

I didn't need to work it out on paper. This composition only has a foreground and a background; it doesn't really have any significant middle ground. I did this to exaggerate the contrast between the architecture in the foreground and the waterfalls in the background which I made a bit hazy to give them a greater sense of distance. I wanted to see how much space I could create between them without having to add very much detail and fuss. As for the flock of birds that keeps reappearing in my work, I really use them to illustrate the scale of objects in the image, but conceptually I almost feel as though they have been migrating and passing through the different worlds that I've created en route to an unknown place that I haven't yet invented.



JAMES CLYNE:

## A PORTRAIT OF BRUCE

This image was an attempt to replicate Renaissance portraiture using a very different subject. I have found that artists have often depicted creature design in stereotypical and predictable ways. This was an attempt at something different by executing it in a classical context, and in doing so, it has created its own mysterious narrative.

I began this image by scanning in a sketch of the creature into Photoshop, then I began adding “paint.” While painting in Photoshop I concentrated on establishing my light and dark values in a monochromatic sepia value. I have found that keeping an image monochromatic for as long as possible forces you to establish, without question, which

forms will be highlighted and therefore be in the foreground and which forms will be darkened and therefore recede into the background. This is especially difficult to do when the subject does not occupy an environment. It is tempting to cheat by using color to create focal points. Focusing on creating areas of lightness and darkness also tends to add drama and mood to an image. Once I was satisfied that I had achieved this, I selectively added color only as emphasis.







JAMES CLYNE:

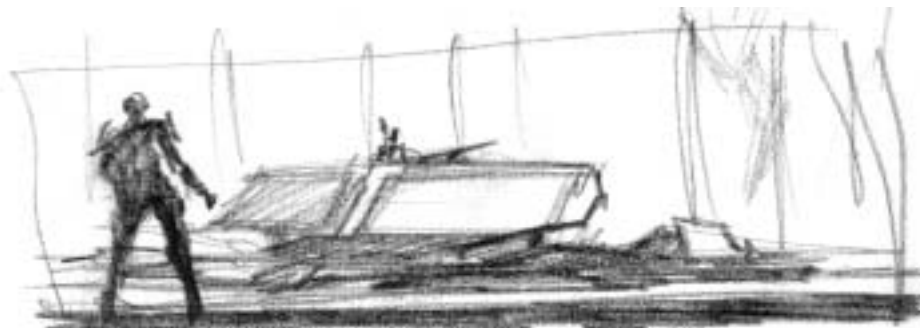
This image reflects my fondness for contrasting the small scale of humans against massive man-made structures. In this image, a migrating group of nomads treks along an endless span of open desert, not even taking notice of the hulking mass looming overhead. Along their journey, a skeletal shell of a mysterious engine part from an unknown craft casts a thousand-meter shadow as a low sun descends upon the plains.

As with previous images, I began with thumbnail sketches to establish the composition and form of the ring. In Photoshop I used brushes to paint the tusk-like ring, concentrating on creating texture with paint strokes. I really wanted the viewer to question whether this image was an oil painting or a digital rendering. Since I don't yet have the time or space to use real oil paints, I love practicing painting techniques in the digital realm. Plus I think that the computer is such an unlikely tool to create that kind of visual handmade texture. Computer generated imagery can be

so visually complex and slick, that I enjoy creating simple images that focus on subtle tones, rich textures, and primitive shapes. I usually transition back to these basic compositions after having created more complex and detailed renderings such as the one on the previous page. Despite its simplicity, there is still a lot going on here. My intention was to force the viewer to look closer and wonder. I also wanted to add a little randomness and chaos to the image by using gestured brush strokes to give this somewhat still image some life.

## RING DERELICT





JAMES CLYNE:

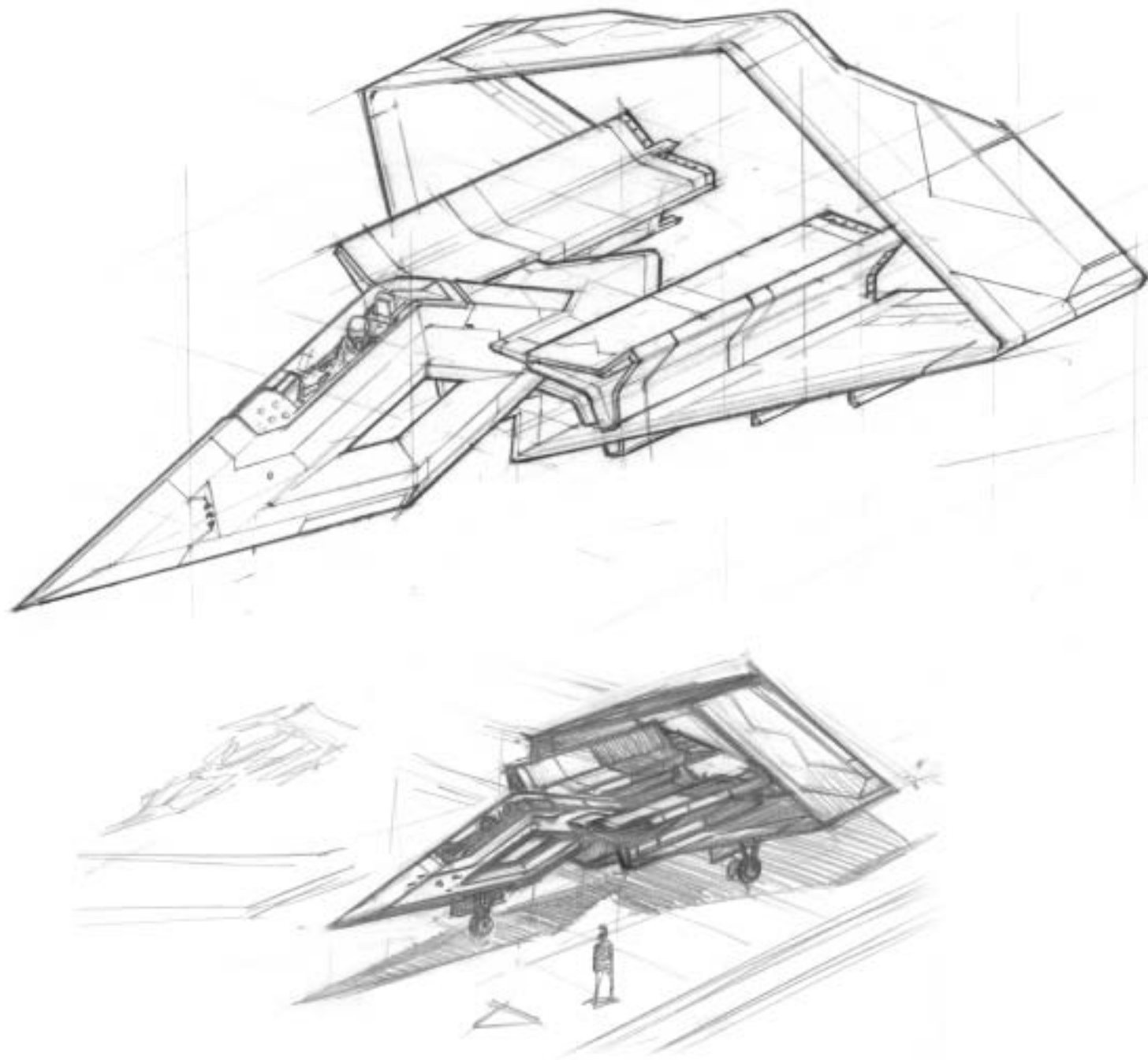
## GREEN MACHINE

This conceptual high-speed vehicle operates free of all physical contact with the ground. Instead, it hovers on a shallow frictionless cushion of air, allowing it to race at speeds far greater than traditional racing vehicles. The design of this vehicle is an exploration in form, incorporating a truss-and-space-frame structural system.

A photograph that I have of my own car inspired the environment and color palette of this image. A friend who is a photographer had photographed it in a parking garage that had an abundance of fluorescent light which created an interesting silver and minty green glow. I attempted to recreate this look in Photoshop. I began with a small, primitive sketch that I scanned into Photoshop, then “drew” on top of it using a Wacom tablet and pen. I was able to redesign and stylize the forms of the vehicle entirely in the computer. I then layered some textures over the form and in the environment to complete the rendering.







JAMES CLYNE:

## ABOVE THE OIL FIELDS

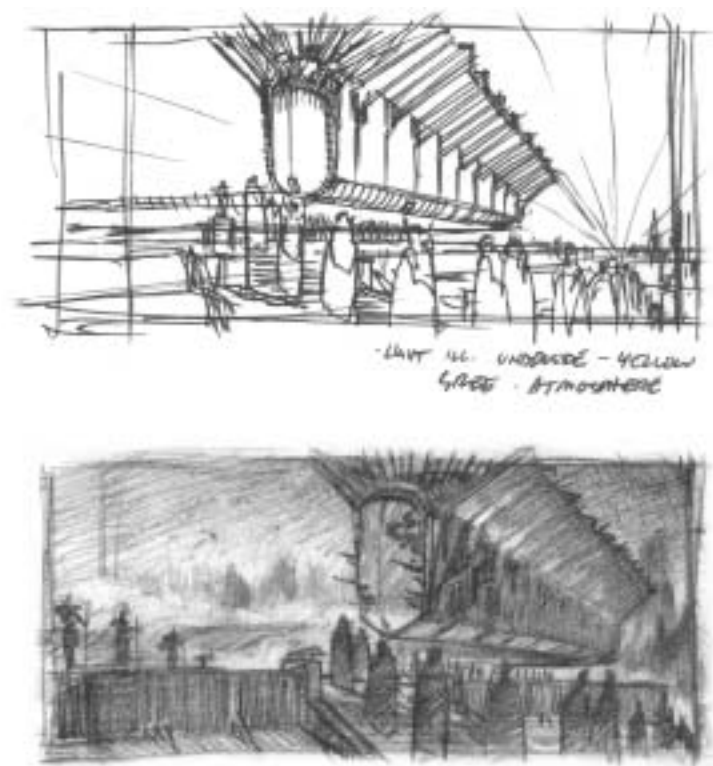
I have always been fascinated with aircraft design and find them to be some of the most elegant designs created not by designers, but by engineers whose goal is to invent machines whose function and form result in ultimate efficiency. Their elegance and beauty are a byproduct of the purpose for which they are created. It is the classic example of form following function; and in this case, physics and aerodynamics determine the forms.

My intention for this image was to design an aircraft that was not only exciting and unique to look at, but also would appear believable. Research has always preceded nearly every sketch I have done, especially when designing

objects that are supposed to operate and serve a specific purpose. When something appears believable you gain credibility, and that is important when using imagery to communicate or tell a story.

This image was created by scanning a sketch into Photoshop and rendering over top of it using custom brushes, texture mapping, and compositing.





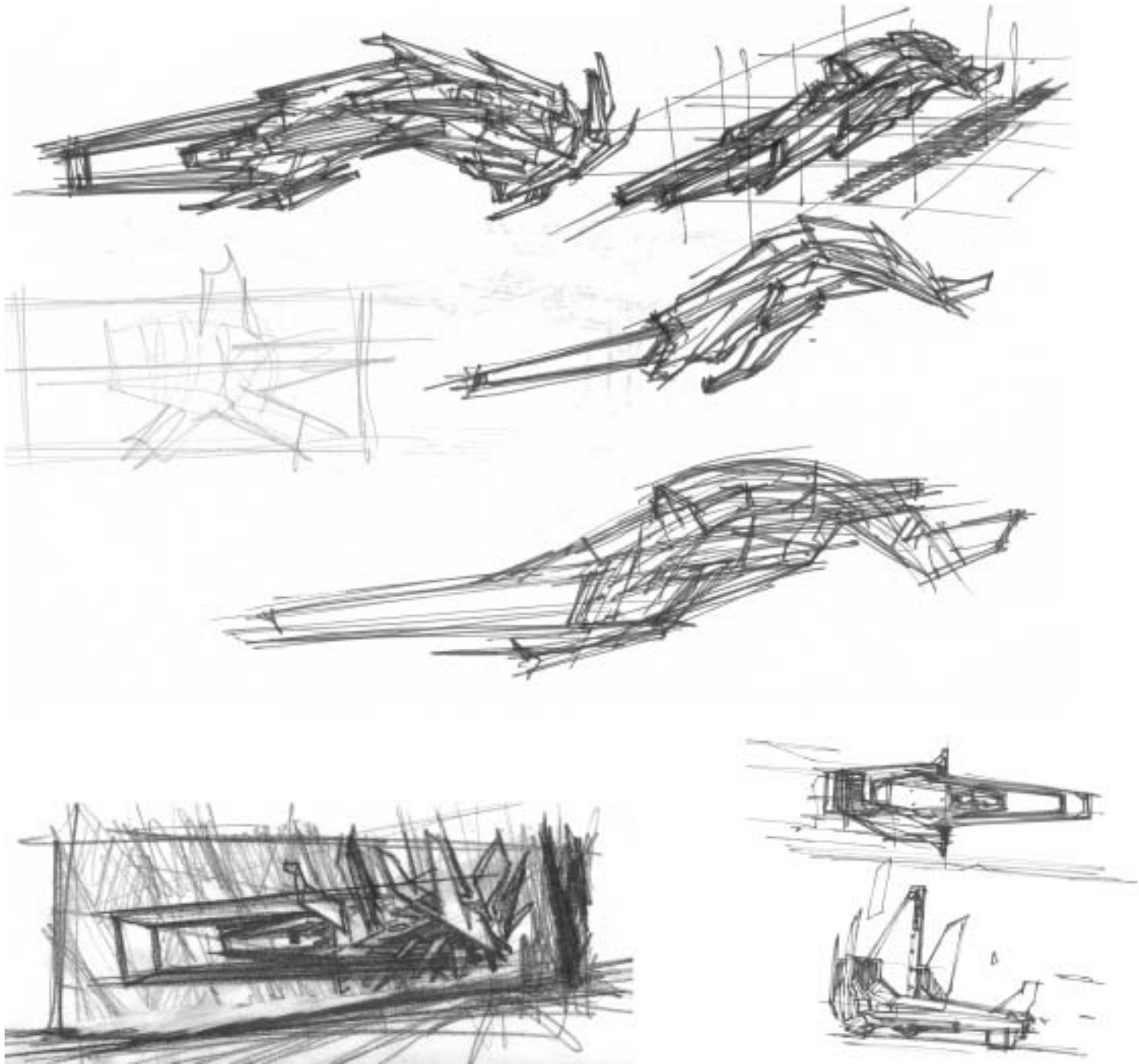
JAMES CLYNE:

## DEPARTURE ON A NUVANIAN WORMTRAIN

Nobles and royalty are always the first to board the transcontinental wormtrain when the city is in danger. Authoritative guards stand at attention nearby, assuring that those with noble status are led on first. Here, Victorian detail is juxtaposed with a kind of macabre science fiction, as the snake-like train slithers its way along the loading platform.

Typically this image would be generated using a pencil sketch followed by marker or gouache. My approach was exactly the same; but instead I used custom brushes provided by Photoshop to achieve this same effect. Photoshop also has brushes that have transparency properties that I used to allow underlying layers to be revealed, which create depth within the texture.





JAMES CLYNE:

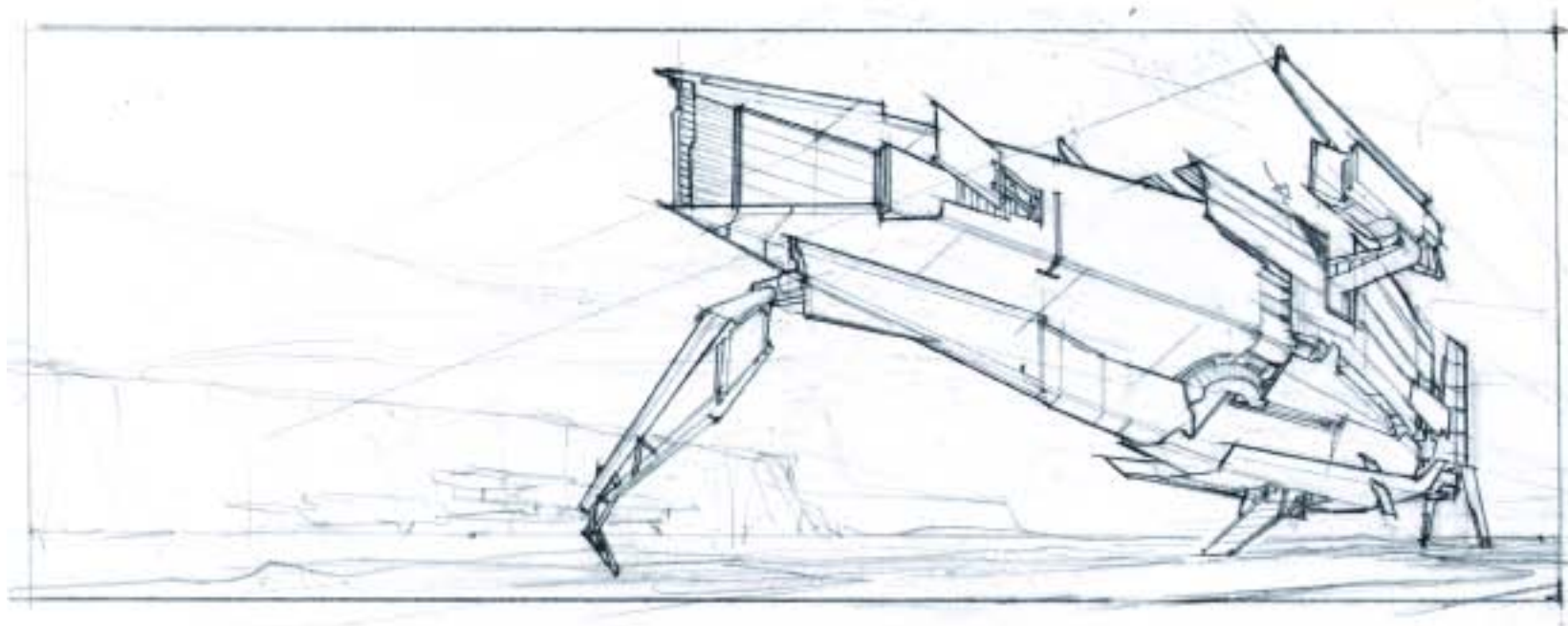
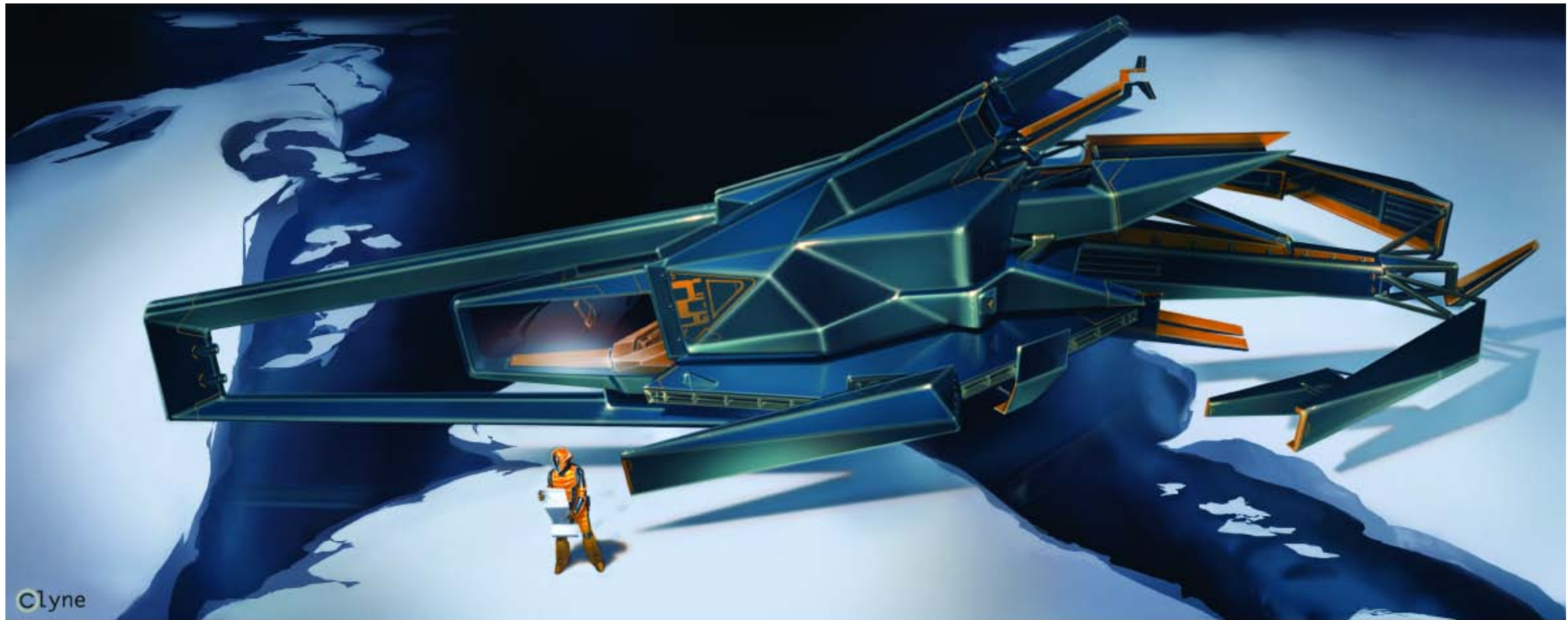
## A POSSIBLE WRONG TURN?

Halfway through a transpolar intercontinental race around the globe, this navigator is lost somewhere between the Wedell Sea and the Antarctic Peninsula due to a crippled GPS system. Forced to navigate using a conventional map, he contemplates his strategy.

This racing vehicle was designed with multiple booms and arms enabling it to maneuver and break with precision and flexibility. Its joints allow it the unique ability to contort and twist into variable positions making it extremely maneuverable.

My preliminary sketches were explorations of kinetic forms and shapes that would allude to the vehicle's speed and flexibility. I think the thumbnail sketches were a bit more dynamic than the rendering because of the line quality and the motion in each line, but I wanted to render the vehicle in a tighter, more technical way. Since the form of the vehicle is somewhat complex and faceted, I tightened my rendering technique to make it slicker and more reflec-

tive. I felt that this was a more appropriate style that would be more descriptive of the form. Since I have a natural tendency to draw loosely with a lot of gesture, I wanted to force myself to tighten up and be accountable for every surface and edge. The looser a drawing is the fewer decisions you are forced to make and commit to. Renderings like this force me to be precise and specific.







## LUNAR TERRAFORMING OPERATION

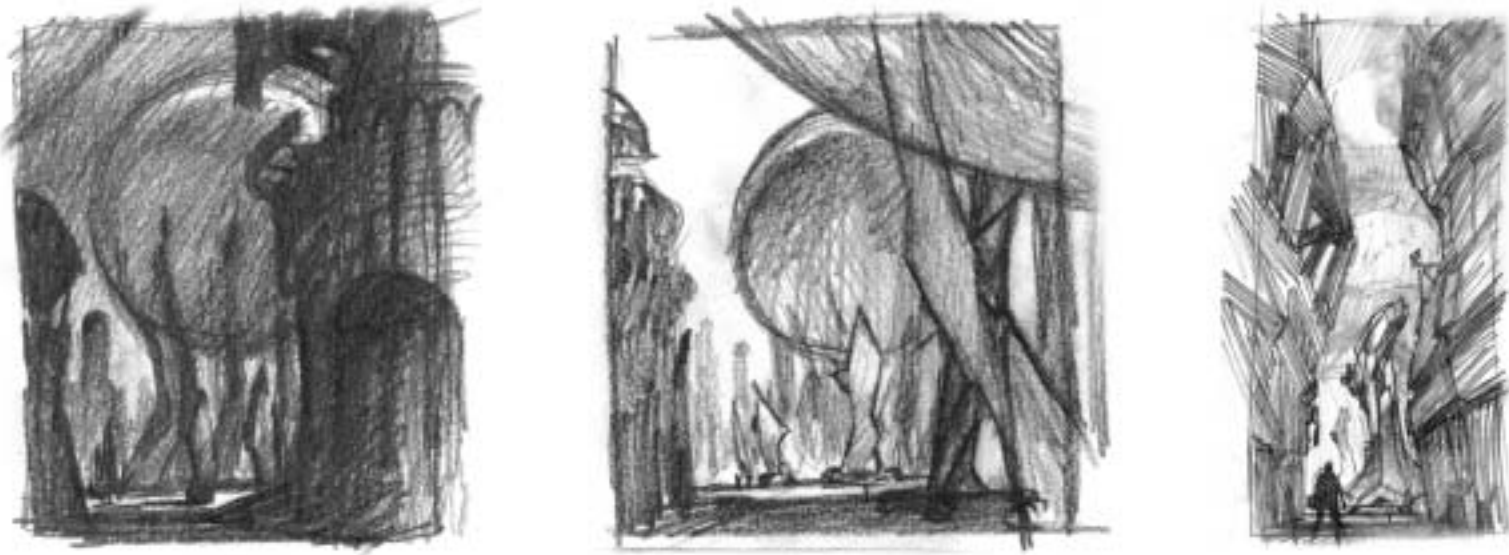
JAMES CLYNE:

After several failed attempts, scientists now believe that by withdrawing water from deep within the moon's inner core of newly discovered ice caverns, their terraforming operation will at last prove successful. Once the water is brought up to the surface and pumped through the eight mile wide transforming spheres, it will then be dispersed as new oxygen-rich compounds, which eventually will create a livable lunar atmosphere. The surrounding city has grown twofold in the last several months and its inhabitants anxiously await the momentous outcome.

Large-scale pieces like this one are fun to do, and I've tried to concentrate on the focal point of the piece, on scale

relationships, and on creating a vast landscape. I was careful not to render every detail in the landscape, allowing the focus to remain centralized, leaving peripheral elements vague. Having a perspective grid is a necessity when doing an image like this. I always have one laid out either on the sketch or in the computer. The image began as a thumbnail sketch on paper no larger than the size of a matchbox, and was followed by extensive painting entirely in Photoshop.





JAMES CLYNE:

# NEW THAILAND

This image depicts a moment in a story that I had in mind. A traveler in his hoverballoon drifts overhead as sunbathers frolic in the aqua blue saltwaters of some far-off Earth-like planet. The travelers are making their annual trek to these tropical lands to sell and trade spices and other commercial goods. Looming even higher above are several massive water-retaining plants called giant guandans. They sit atop columnar land formations with beach-covered foundations. These spherical plants supply an abundance of freshwater for the inhabitants dwelling directly below.

This image went through many design variations, beginning with very architectural and structural elements

then evolving into more organic and sculptural forms. The repetitive use of spheres was constant in all of the thumbnails as well as the final image. The final thumbnail sketch was scanned into the computer and used as an underlay. It was important to me to try to replicate traditional painting brushstrokes using the custom brush tool in Photoshop while allowing the underlying sketch to peek through. The sketch had a grainy quality that I wanted to preserve by not covering it completely. This is a technique common to oil painting, and I enjoy manipulating a digital tool like the computer to resemble a more tactile medium.







# HARALD BELHER

At 10 years old, I played tennis, basketball, soccer, didn't speak a word of English and never even considered spending a moment to draw a picture. In my late teens, I wondered if I had the talent to become a professional tennis player. That thought completely dominated my time. It was my first big dream. The thought of drawing for a living never even crossed my mind. At the age of 22, I packed my bags and headed to Georgia on a tennis scholarship. I played tennis a minimum of four hours every day. In typical German fashion, I selected engineering as my major. By default, my minor was English immersion and I tried my best not to complement my German accent with a southern drawl. In my senior year, I received a car magazine from a friend. There were four automotive design schools featured in it and one caught my eye. It was called Art Center College of Design and its most attractive characteristic was that it was located in Southern California. I picked up a pen, drew a few pictures and sent off the application.

We all have days in our lives that we will never forget because something made an immortal impression. My first day at ACCD struck like a bolt of lightning. It launched the beginning of a new obsession. I retired my tennis racket and immersed my thoughts into a new dream, designing. I spent my next four years honing my newfound talent and sharing this passion with a class that later turned out to be amazingly special.

After graduating with honors, my first job out of ACCD was to be a designer at Porsche in Stuttgart, Germany. I thought this was a phenomenal opportunity, until I realized my heart belonged to Los Angeles. I found another great opportunity at the Advanced Design Studio for Mercedes-Benz in Orange County. I rushed to fulfill the natural path towards my dream. Unfortunately, it was clouded by the startling truth of the business world: corporate decisions rule design.

If I wanted to make a difference in the world of design, I believed I needed to be independent and leave the stable design job that long ago would have been the pinnacle of my achievement. I thought long and hard about the stark reality of the freelance design world. I decided to dream bigger and take that jump.

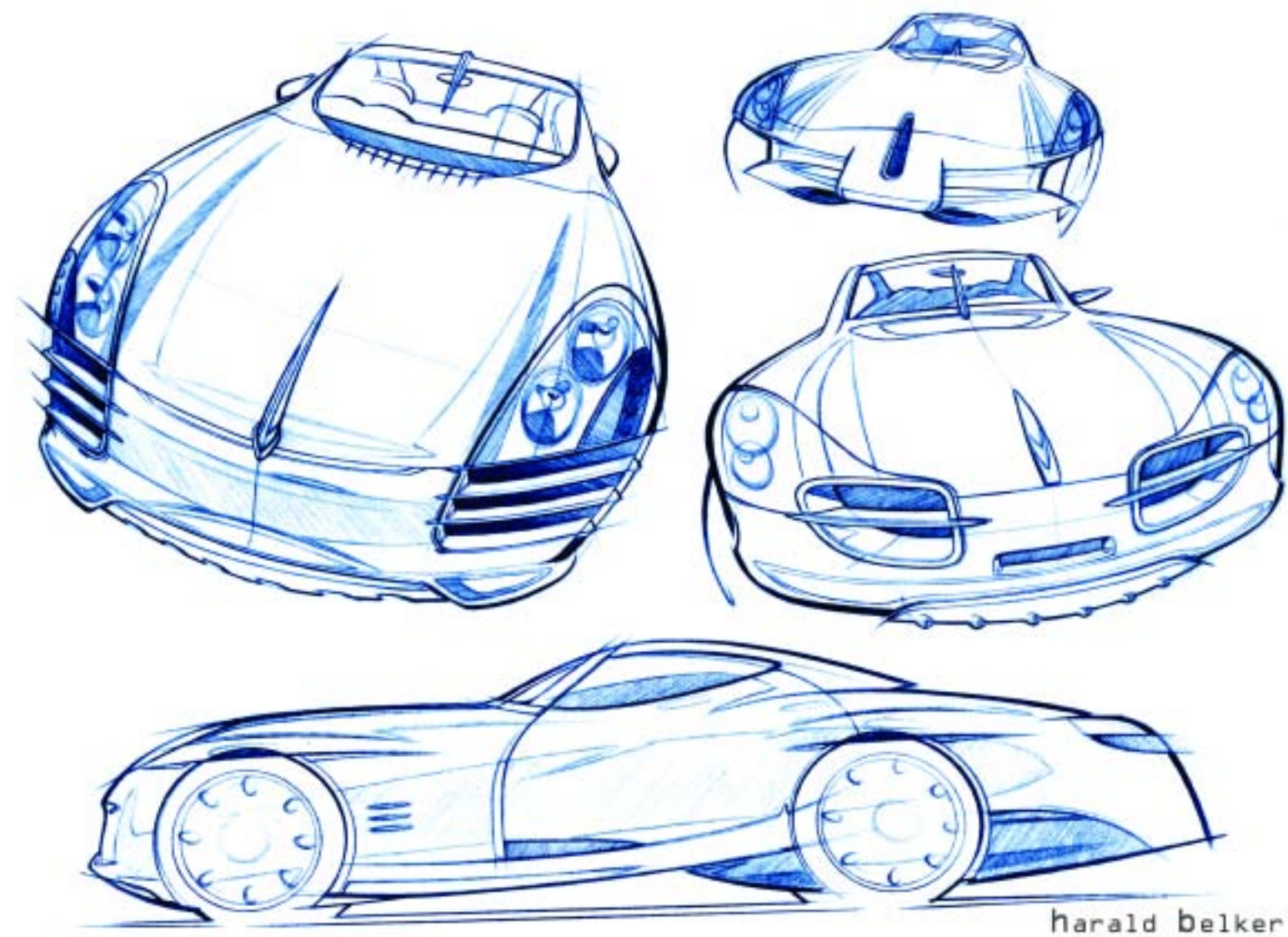
Lucky for me, lightning struck again. A colleague from ACCD called with an opportunity to design a vehicle for a small movie at Warner Bros. Turns out that movie was "Batman & Robin" and eight "Bat" vehicles later, I had a new career.

Each movie I work on makes a special mark in my design development. My most gratifying project was the movie "Minority Report" which featured a handful of vehicles that were set in the future. I was given the rare opportunity to design and realize a truly futuristic way of transportation. It was definitely a chance of a lifetime.

Since 1995 I have designed a series of electric bikes for Lee Iaccoca, consulted companies like Porsche Style in Huntington Beach and Nissan Design International; and I have had the good fortune to design vehicles and props for numerous motion pictures, including "Batman & Robin," "Armageddon," "Deep Blue Sea," "Inspector Gadget," "Battlefield Earth," "Spider-Man," "Minority Report," "XXX," "The Cat in the Hat" and currently "Superman."

So today, as I reflect upon my winding path to becoming a designer, I'm amused by the things that helped me along the way: dreaming big, accepting all of life's twists, always maintaining a level of fun, and finally, waiting for lightning to strike. Oh, and I must not leave out innovation, one of the most important drivers of design. This book is a compilation of design work from a group of innovators and re-innovators. I am thankful to be a part of it.

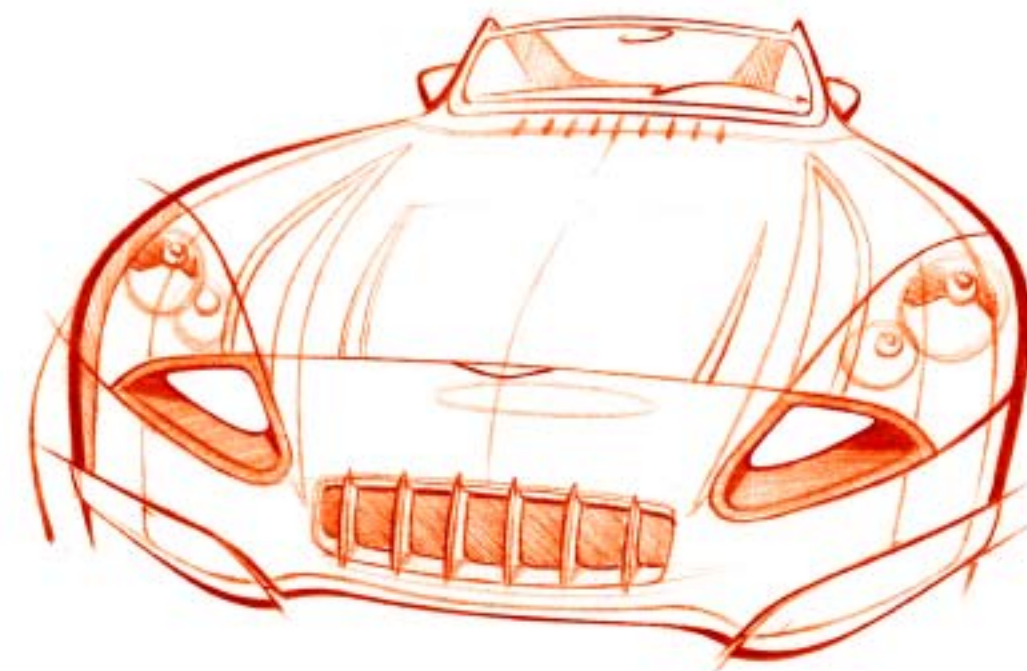




HARALD BELKER:

Different things stand out to different people when they look at someone else's work. Someone recommended I do a page of a bunch of sketches the way I used to do them in my old Mercedes-Benz days. I looked at some of my work dating back to '93 and thought, "Why not?" I have to admit, it gave me great satisfaction to do a bitchin' line drawing. One can put so much dynamic into the weight of the lines. I used to do this all the time to find the right graphics (headlights and grill) for a car. With Photoshop, you can now throw some color on it and within a couple of hours you've got a decent sketch. Back in the old days, we used marker and chalk. Very messy!

## AUTOMOTIVE LINES



harald belker





harald belker

## FEMME

HARALD BELKER:

The female face is about the most difficult thing to illustrate. Inspired by another artist's technique, I wanted to paint an over-stylized, comic-like hipster with extreme body features. Again, inspired by this artist, I had a blast painting it. It is a great learning experience to play with someone else's technique in your own work. I wanted to try it once and now that I have, my exercise has been completed.

The face above is more symbolic of my technique without external influences. I just tried to paint a random face as realistically as possible, without the loss of a painterly quality.



harald belker





HARALD BELKER:

I decided I needed a male police officer for my police car. The first guy I drew had no detail and did not fit into the style of the illustration at all, so I made it a project to draw him in detail. I gave him gear that resembles that of a cop, or at least a futuristic movie cop. Naturally, I had the most fun with his rifle. When I draw people, I gravitate to super-hero proportions: wider, taller and a smaller head. After all, this is just a drawing and normal human scale is just not flattering.

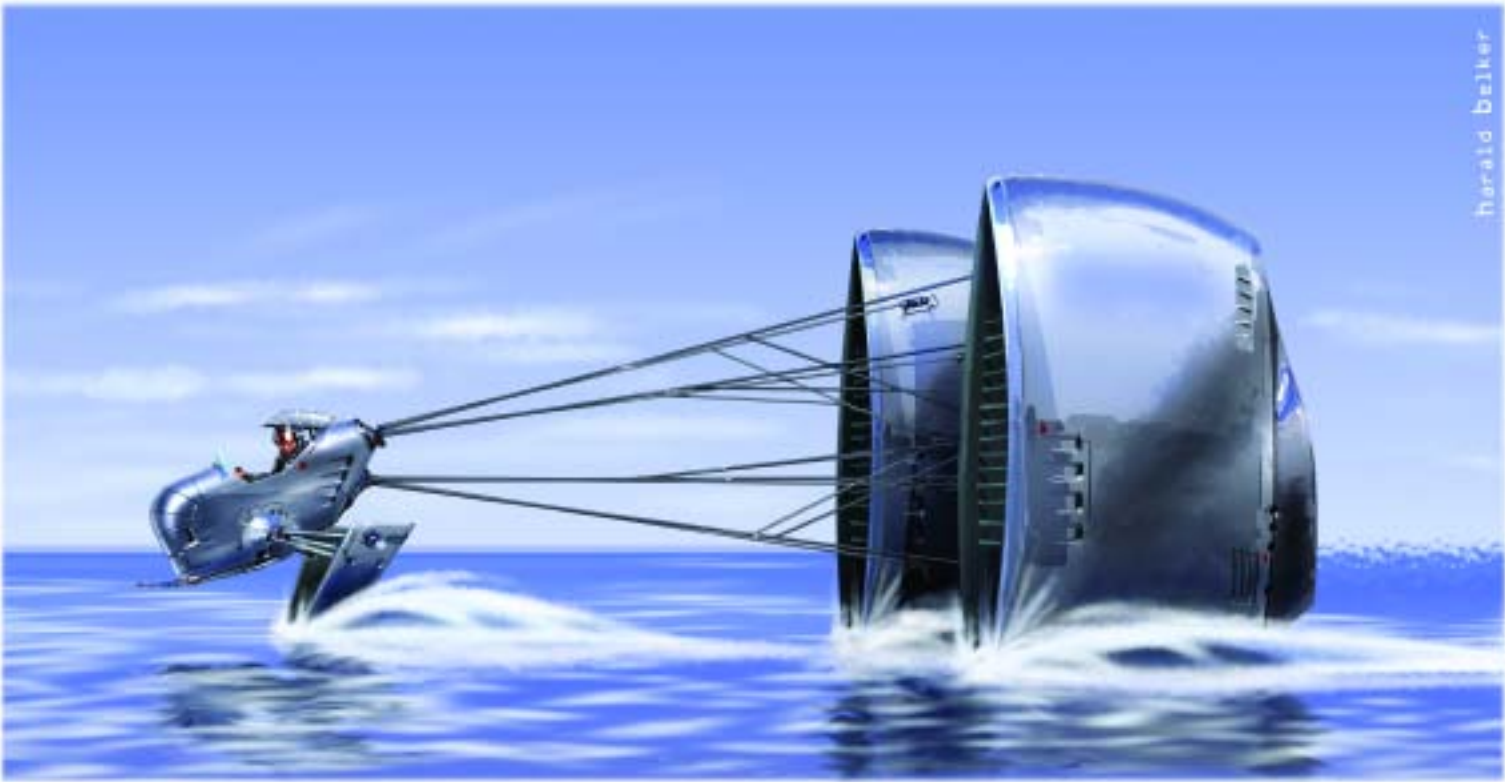
The headgear is a combination of a full helmet and eyewear. After starting it in full color, I opted for the monochromatic look. It played out the sketchy quality a little better without distracting from the blues and yellows that the original had.

DUDE

harald belker







HARALD BELKER:

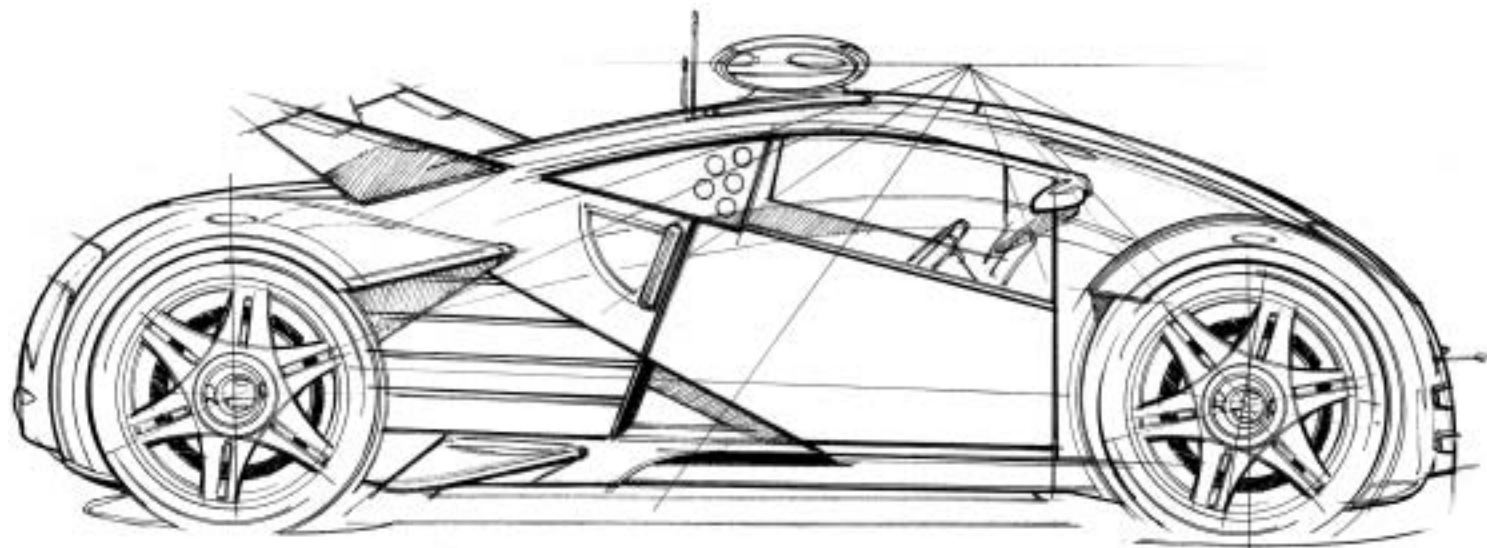
This page is all about sketching on a computer. There is no previous line drawing or concept. The ghost was done by using only the lasso tool. The faster I used the function, the better and the greater the chaos of the lines became.

Above: I am not sure any more if it is a push or a pull vehicle. I often have ideas like this in my mind when I begin to draw each day and I usually leave the image unfulfilled once I get into the work mode. On this day, I decided I would commit an hour to finishing one of my starter concepts and this is the result. I included this drawing in the book because it's important to respect and appreciate every creative notion.

RANDOMNESS







HARALD BELKER:

## FUTURE EXECUTIVE POWER

This illustration is an evolution of my “Minority Report” car and was never built. During movie production, I never really had the opportunity to do an all-out illustration. With this book in mind, I had a perfect reason to complete the design. For the police version, I enhanced the tail section to give the vehicle more proportion. After the film was released, I frequently heard that the hero's car looked like it should have driven the other way. The background is an abstract manufacturing plant. I like the resulting feel of this bad-ass cop car. I spent a lot of time playing around with a person to complement the picture. This guy was adopted from another page in this book and my thought process on him is explained on page 50. I debated whether he was too distracting. In the end I opted to include him to complete the image.



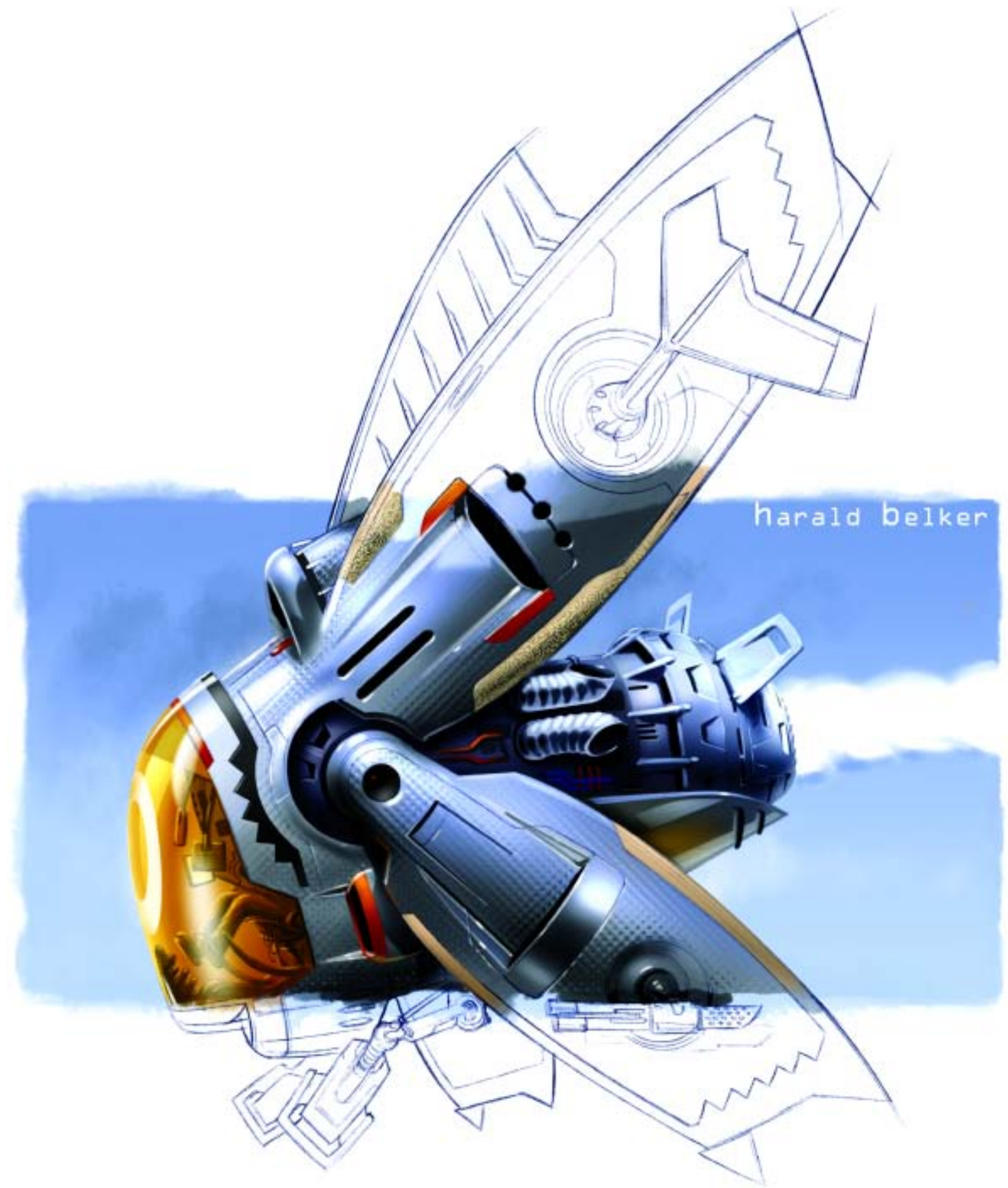




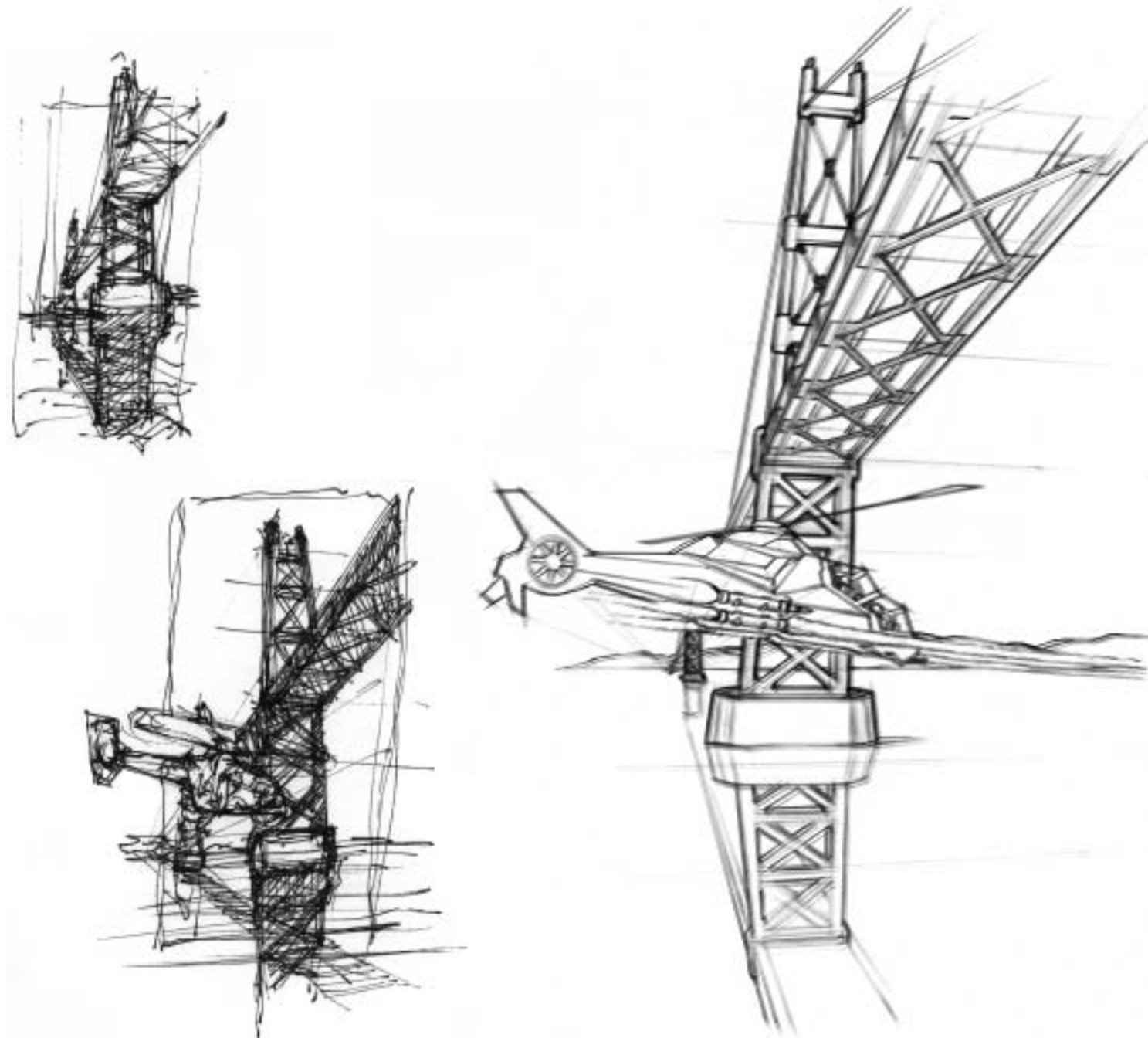
HARALD BELKER:

After drawing an endless number of metal vehicles for the movie “The Cat in the Hat,” I thought I would use all of that knowledge to paint metallic surfaces. For these kinds of vehicles I find it absolutely necessary to start with a tight line drawing. Once I have established it, I scan it into the computer and Photoshop the hell out of it. Both vehicles are just pure fantasy. The one on the right is partially designed.

## FLYING SHEET METAL







HARALD BELKER:

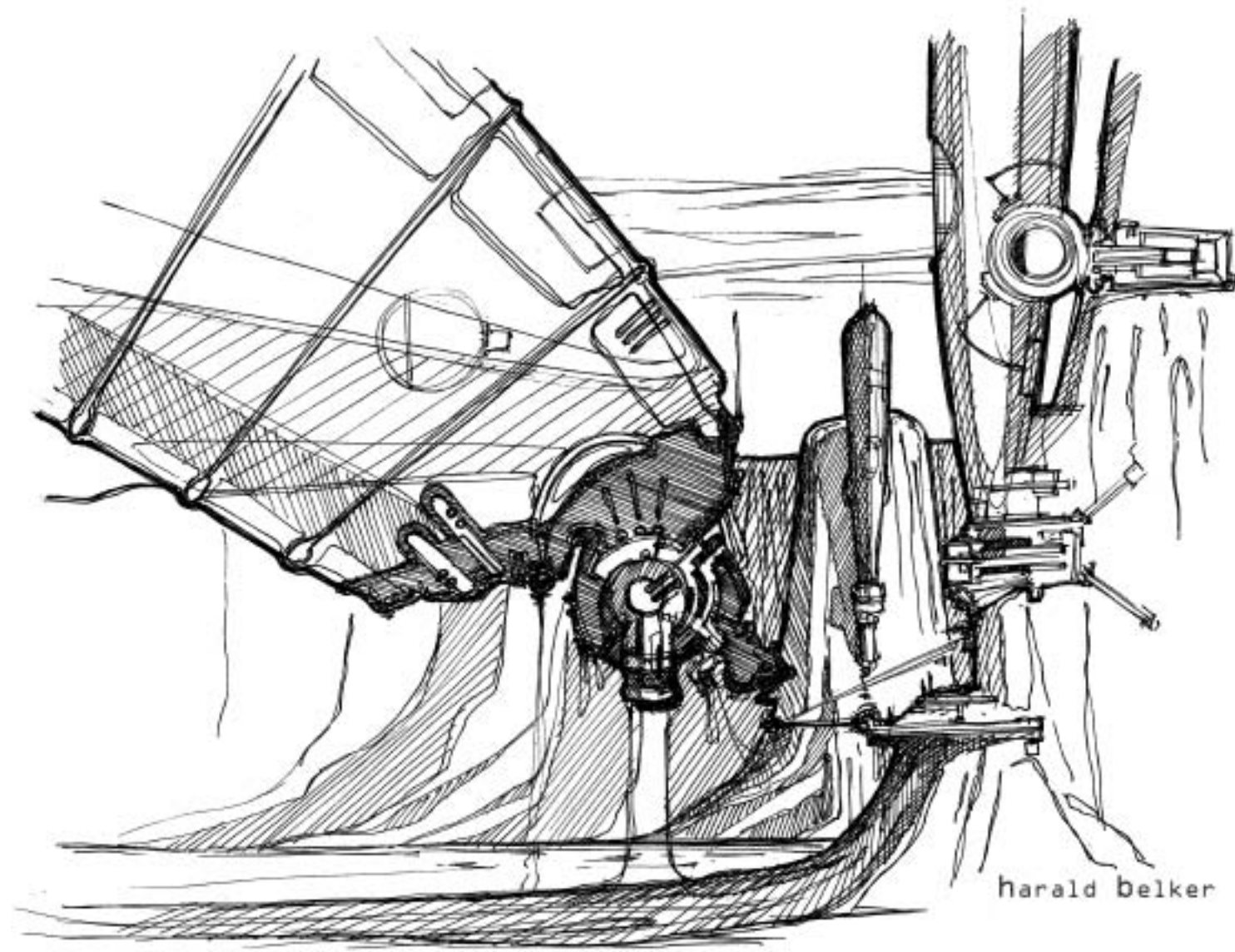
## HELICOPTER UNDER BRIDGE

I think I got motivated to do this piece after watching a helicopter segment on The Discovery Wing Channel. I thought the dynamics of one flying underneath a bridge and launching its missiles was a good composition for a vertical picture. It was definitely a painting I wanted to do in just a few hours. The line drawings were very quick and so was the actual illustration. Nothing is really sharp; I kept it all sort of loose. This was the first illustration where I tried to paint water. I was inspired after watching a master, Scott Robertson, do it so well. I still have quite a way to go on the subject. Whenever I sketch out new ideas, they look much like the little line drawings you see above. The quality is raw, unfinished and precious. Friends have joked about this phase and have asked if I was ever trained in metal etching.



harald belker





HARALD BELKER:

This is an abstract on a grand scale in a mystical setting. I started out with a full cityscape and a superstructure above it. I will definitely attempt this concept for the next book. I simply wore myself out with the city before I ever got to the superstructure. I first considered this scene to be either at nighttime or in bright daylight. Both had interesting contrasts. I landed sort of in the middle and basically played around with the overall scale of the piece.

## FANTASY







HARALD BELKER:

## FIRE ENGINE

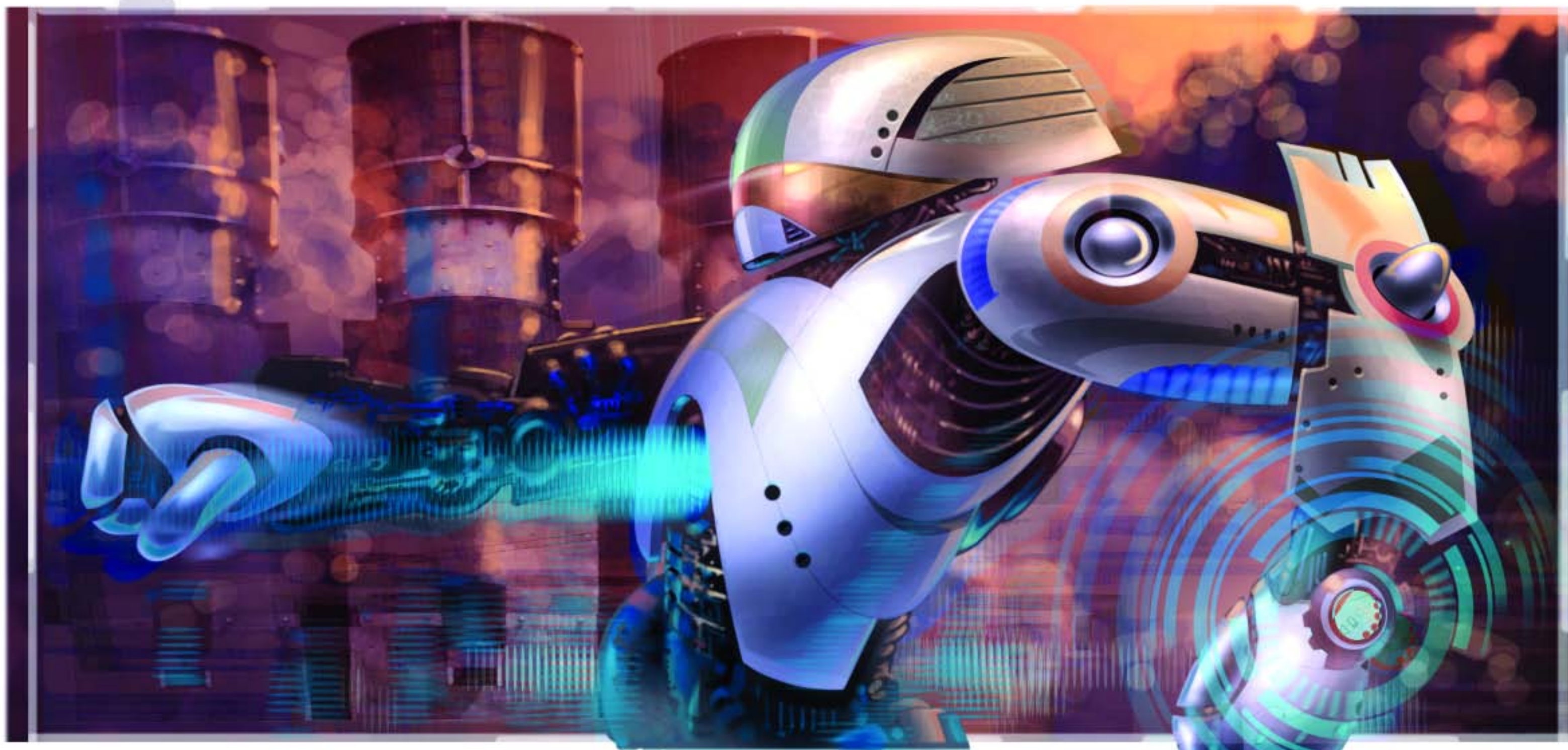
A remake of the film “Fahrenheit 451” was one of those projects that got as far as early pre-production and was canceled after only a few weeks.

The idea was to build a gigantic fire engine and would have been a great challenge for me. I created it and then had to walk away from it, but a design concept like this keeps on living. I would find sketches in my portfolio that reminded me how cool a vehicle like this could be and I continued to imagine all the changes I would make. This was one of my first projects for the book. I wanted to take it a step further than the original film design. The principal idea remains the same but the proportions and details have been modified. I used colors to set the mood as shown in the actual illustration on the right. These allow the vehicle to blend into its environment. The dynamic of the bridge in the background was used to emphasize the extremely wide wheelbase design for the truck.

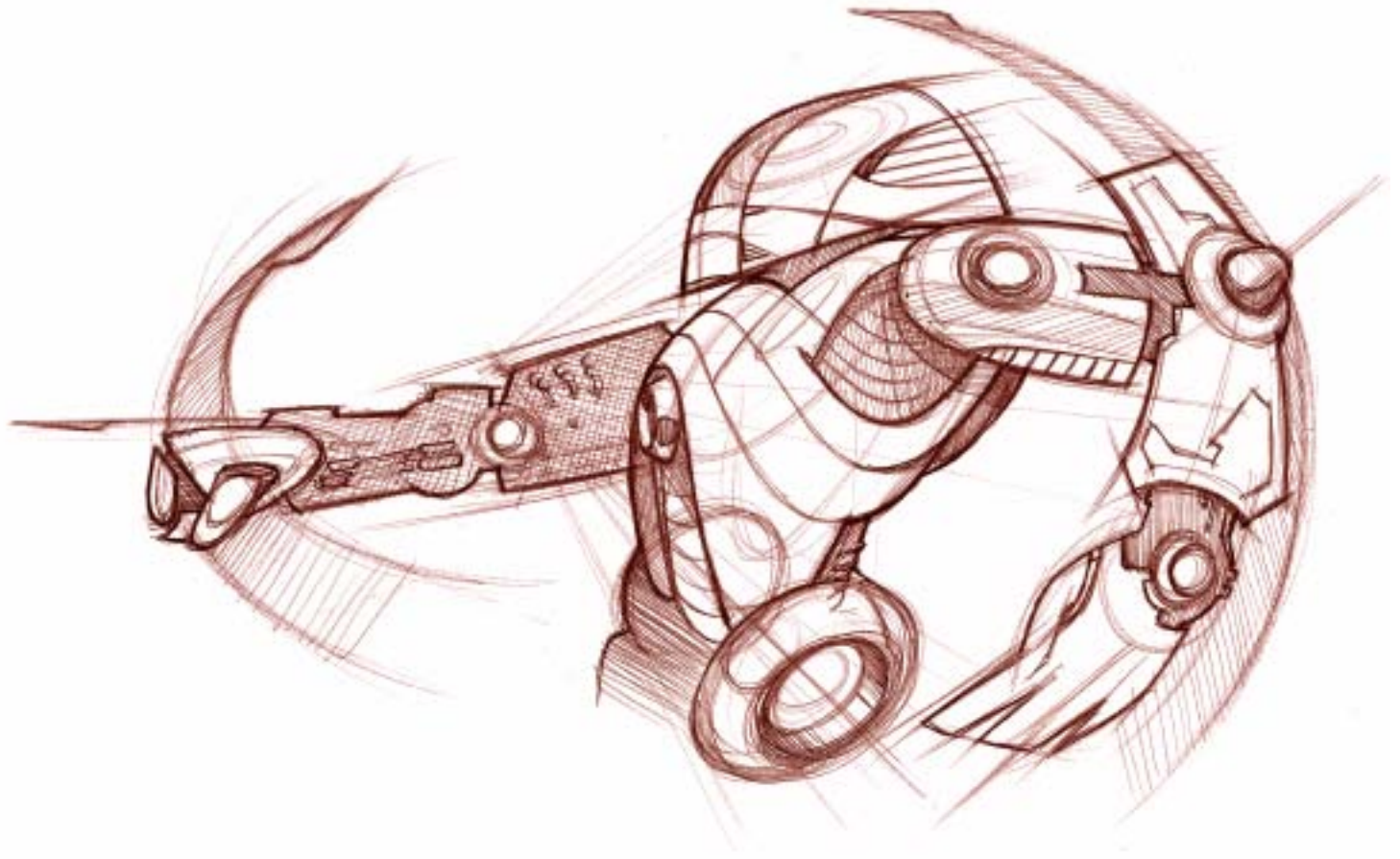


harald b e l k e r









## ROBOTICA

HARALD BELKER:

Robots and mechanical human beings create a certain kind of tension.

In my illustration I wanted to focus more on that energy than on special robotic or extreme mechanical details. In my line drawing I wanted to see if I could give it dynamics that would make for an interesting illustration. In the final attempt, I realized that the lines were harmonious but the functions were definitely sacrificed. Again, background colors were used to enhance the structure of the actual robot. His shiny armor becomes a foreign element which gives it a contrasting pop. Since it was one of the earlier pieces for the book, I was still attempting techniques that were different

from my normal use with respect to painting shiny cars.

Overall, I could have spent many more hours on detailing the mechanics, among other things. I found this to be a typical problem I had with a few of the later pieces. It is tough for me to refrain from revisiting a piece and constantly adding things to an illustration.



## SCOTT ROBERTSON



Scott Robertson was born in Oregon and grew up in the country. As a child his artist father, Richard, taught him how to draw and design the toys he played with. Fascinated by speed, he and his father designed and built soapbox derby cars. At the age of 14, Scott finished sixth in the world at the annual race in Akron, Ohio. In 1984 he attended Oregon State University, where he studied all that he could while rowing on the crew team in the bow position.

After two and a half years at Oregon State, Scott transferred to Art Center College of Design, where his father had attended before him. After many all-nighters and skin-thickening critiques he graduated with honors with a B.S. degree in Transportation Design in April 1990.

The day after graduation, Scott opened a product design consulting firm in San Francisco with friend Neville Page. Soon they were designing a variety of consumer products, the majority being durable medical goods and sporting goods. Clients included Everest-Jennings, Kestrel, Giro Sport Design, Nissan, Volvo, Yamaha, Scott USA, Schwinn, and Medical Composite Technology.

In 1995 both Scott and Neville relocated to Vevey, Switzerland to teach drawing and industrial design at Art Center, Europe. Upon the sad closing of ACE in the middle of 1996 they relocated to Los Angeles.

Scott continues to share a studio with Neville where they do consulting work for a wide range of clients. Over the last seven years since returning from Europe, Scott's clients have included BMW subsidiary Designworks/USA, Bell Sports, Raleigh Bicycles, Mattel Toys, Patagonia, Scifi Lab, 3DO, "Minority Report" feature film, Nike, Troxel, Rock Shox, Universal Studios, OVO, Black Diamond, Angel Studios and Fiat, to name a few.

Scott is married to film editor Melissa Kent and they live in Santa Monica. Having designed a wide variety of wheelchairs, bicycles and helmets, it's hard to walk down the street without seeing some of the products Scott has designed zooming by. He continues to teach at Art Center College of Design, and at Otis College of Art and Design. In addition to working as a design consultant for the entertainment industry, sporting goods industry, and transportation industry; his recent projects include launching a small publishing company, Design Studio Press, co-authoring *Concept Design*, writing *How to Draw Vehicles*, teaching private drawing classes and corporate workshops, designing vehicles for an upcoming video game, and designing bike helmets. In his free time he likes to...hey, what free time!

SCOTT ROBERTSON:

Early during our project James rendered the piece on page 23. When he presented that piece to us at our bi-monthly meeting, I really liked the new approach to suggesting form he described. The two images you see here are a result of my trying to blend the sketching techniques he introduced to us with the typical product-rendering techniques I use frequently. I executed the sketches entirely digitally using the “lasso tools” within Photoshop and Corel Painter.

The top sketch on the opposite page was done in Photoshop. I approached the sketch by imagining a simple speed-form vehicle accompanied by a figure of some sort. In order to render in this fashion, sketch expressive forms with the lasso tool and then fill the selection you have made with an opaque color on its own layer. The process moves very fast and you should try to let it be very random and expressive.

As I progressed I started to see forms revealed through this sketching process. As I saw the forms beginning to take

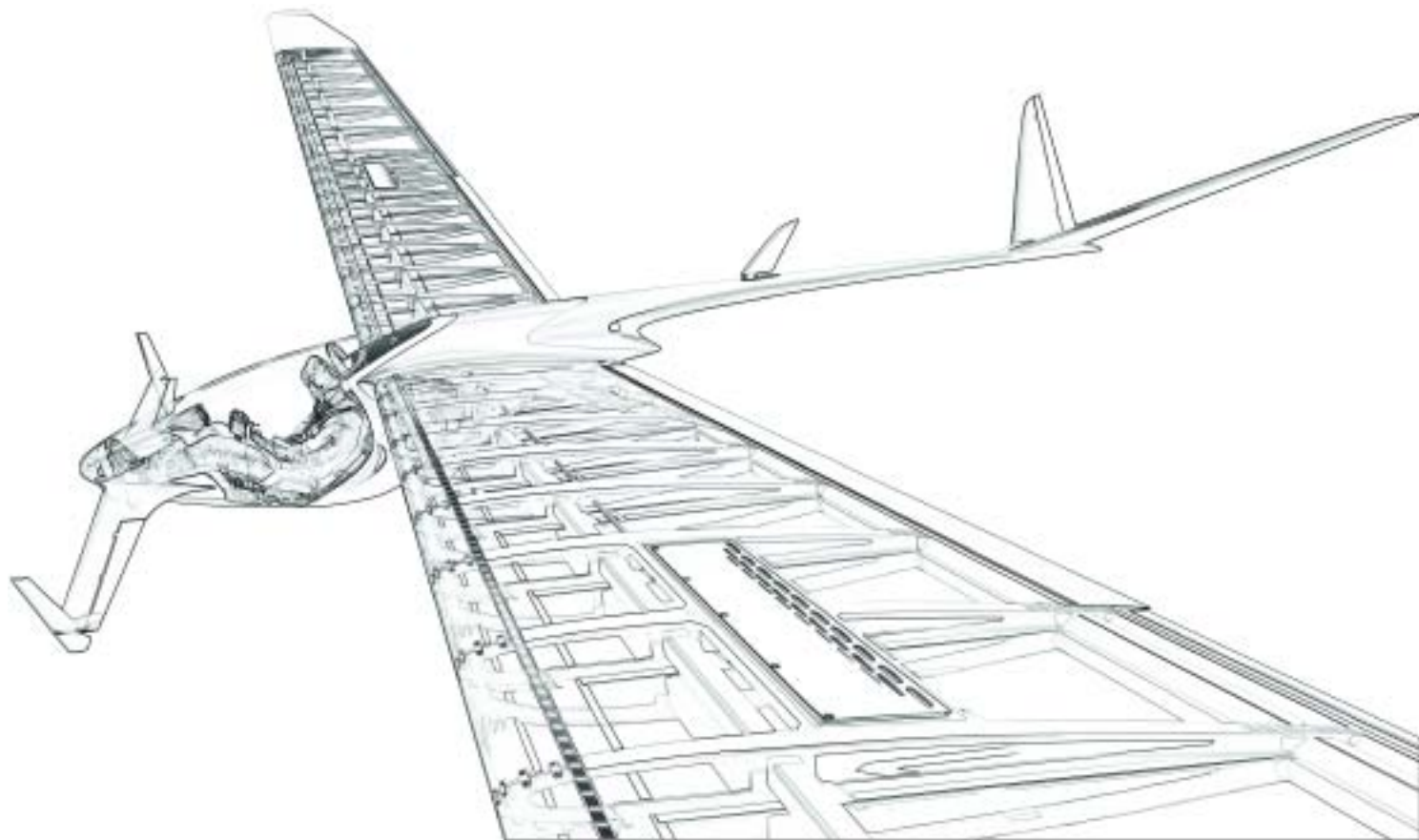
shape I tried to add more foreshortening to the shapes as they wrapped around the volume of the vehicle. After I had several layers arranged on top of one another, I set each layer to “preserve transparency” and started to render the form within an indoor studio environment. The process of shading the surfaces, and adding cast shadows and reflections of the environment I had created, started to give the flat 2-D vehicle a more realistic illusion of volume.

If you look closely you can see that the lines of the top vehicle are slightly faceted as compared with those of the lower vehicle. I was not very happy about this result and so to achieve the smoother lines you see in the lower vehicle I did the same steps as above within Corel Painter 7.0. Both designs are purely sculptural explorations of vehicle forms using this digital lasso tool-sketching technique. I hope to experiment more with this technique in the future.

## L.T. VEHICLES







SCOTT ROBERTSON:

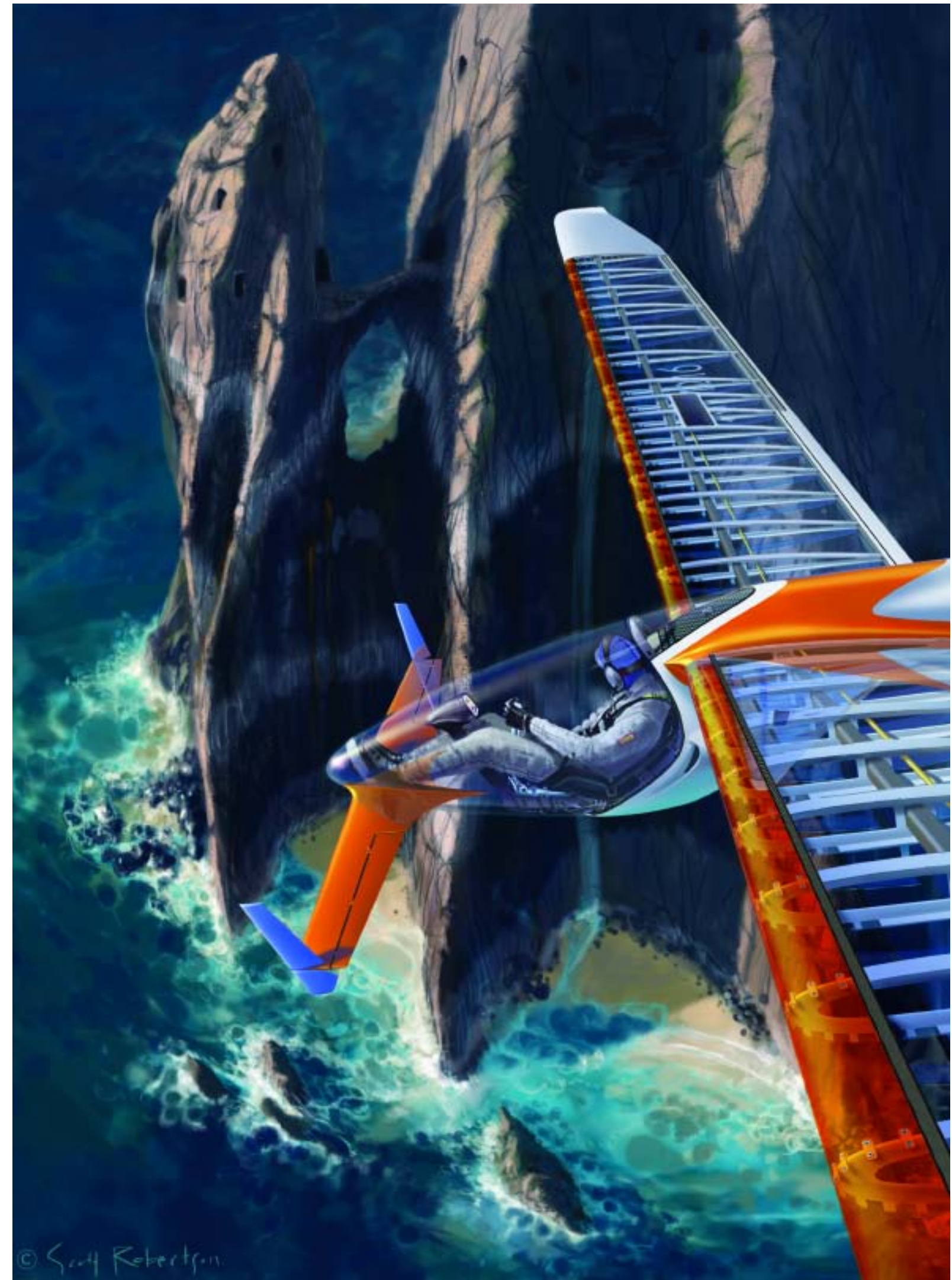
## BOYHOOD DREAMS

When I was a kid growing up in the Oregon countryside I used to build model airplanes. As I would hand launch these frail creations on their perilous flights, I would always imagine myself on board the model piloting the craft over cliffs, meadows and usually ending my daydream into a tree! The models became more elaborate over the years and progressed from folded paper planes to remote control sailplanes with wingspans of six or seven feet. In this piece I let my imagination run back to those fun-filled afternoons in the countryside when my brother and I would chase after our creations as they effortlessly glided along to their demise.

I started this one by doing a line drawing in ballpoint pen on tracing paper. I have always loved the aesthetic of clear mylar covered wings of model sailplanes, so that became one of the main elements of this design. In addition you can see I had quite a bit of fun extending the clear construction to the cockpit as well. The rendering was executed

in Photoshop using all of the immense layering capabilities it contains. When doing the line drawing I was trying to achieve a very forced perspective much like you would see through a fish-eye lens of a camera. I think the perspective distortion might have gotten a bit out of hand!

Above you can see the full sailplane design. This line drawing was created by making a copy of my plane rendering in a new file and then turning down the saturation to make it black and white. Then I processed it using the "find edges" filter. The line drawing you see here is the result. This piece was done early in the project and therefore it reflects my tight industrial design rendering background. In typical I.D. fashion, a designer usually strives to show every surface of the designed object perfectly clean and as one might see it in an advertising photograph.







SCOTT ROBERTSON:

## BEACH SALVAGE, SNEAKY BOT

When I had gathered my work together for our second meeting of the project, I planned to present two pieces; a large futuristic Los Angeles cityscape with a hover-car chase through the L.A. riverbed in the foreground, and a woman on a futuristic motorcycle. At the meeting I presented the two pieces—neither one finished but both blocked in enough to critique. Nick suggested that I would be much better off to try doing a large number of faster color thumbnail sketches than very labor intensive finished renderings. I think he looked at my cityscape and said I should do ten fast ones instead of one finished one if I really wanted to improve my digital painting skills.

I took his advice and started painting very fast loose pieces with most of my initial focus on establishing my color palette and practicing composition, two very unfamiliar things for me to do. I have always been more of an object drawing guy, concerned primarily with whether the object is correctly proportioned and whether it's drawn properly in

perspective or not. Composition and color for me were further down the list of concerns—if they were even on the list.

What you see on both of these pages are two of the many color sketches I have done at Nick's suggestion. The one above is a sketch done in about an hour and a half in Photoshop with one additional layer for the truck. The one to the right was roughed out in about an hour but I went back and spent one afternoon changing the robot design and rock forms to be something more interesting. Obviously I still need to spend another afternoon on it.

The original thumbnail of the Sneaky Bot still resides on my professional web site, [www.DrawThrough.com](http://www.DrawThrough.com) under “forum sketches and renderings.”

I wish I had a compelling story to go with each, but I will leave that up to your imagination.







SCOTT ROBERTSON:

Here I am back at what I enjoy the most, quirky, small vehicles. This time I settled into imagining a funky little snow vehicle returning to headquarters high in the mountains. The time of day is late afternoon and I wanted to explore a very saturated color palette. The vehicle in the image to the right is the only one I spent any real design time on...meaning more than thirty minutes.

The process for this piece started with a series of monochromatic thumbnail sketches where I was searching for a composition I liked. The sketching technique I used here has been around as long as markers have been. I begin a sketch by first defining the proportion of the piece, then I sketch in what I'm thinking of with light value markers, such as a 10% light grey. After I start to see the shapes forming I use darker greys to define the forms better. I think a little about the overall values of the piece but mostly I focus on the composition as it relates back to the objects and the viewer. After the marker work is done I usually take a few

minutes to go back with a pen—a ballpoint in this case—to define the design of the objects a bit. This type of sketching is very fun and fast. The sketches you see above were each done in about 15 to 20 minutes. After I have a stack of these I choose my favorites and scan them into the computer and paint directly over them in Photoshop.

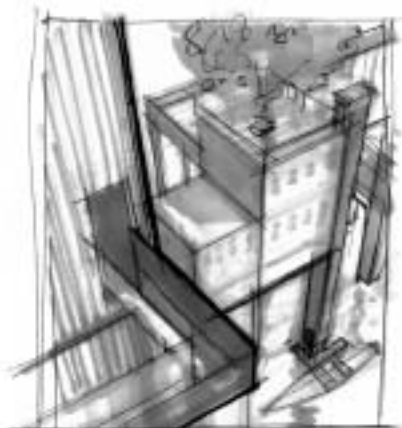
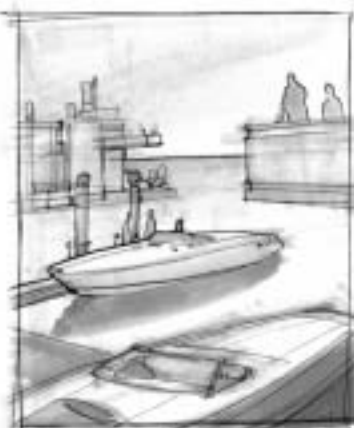
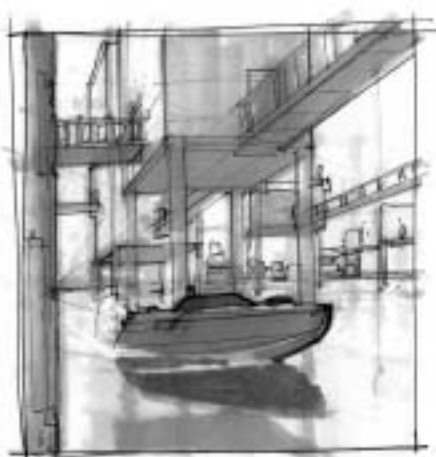
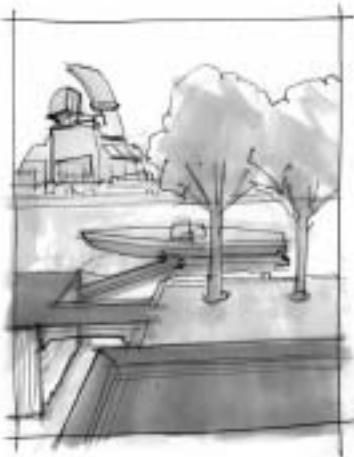
The two color comps on the top of the right page were done in about an hour and a half each. My focus with a comp is to set the mood and color palette of the piece, along with doing the design of my cast shadows. The larger piece to the right is one of my quick color comps that I went back to and finished up a bit more. To make the snow vehicle more interesting I designed an articulating upper cockpit that can move freely, allowing it to stay level as the lower track portion encounters rough or uneven terrain.

Unlike my early pieces this rendering was done with a minimum of layers, no paths, and primarily one brush in Photoshop.

# OVER THE PASS







SCOTT ROBERTSON:

## BOATS, BOATS, BOATS

This two page layout is like an itch I just can't scratch! I feel that I could come up with something very interesting on this boat topic using familiar materials to build unfamiliar forms. I hope that this book is a success so I can revisit this subject next year in our second volume of *Concept Design*. I have such rich images floating around in the back of my head of wonderful color renderings of sumptuous wood finishes on futuristic sculpted forms. So, instead I present to you the start of a project to illustrate my imagination of these boats.

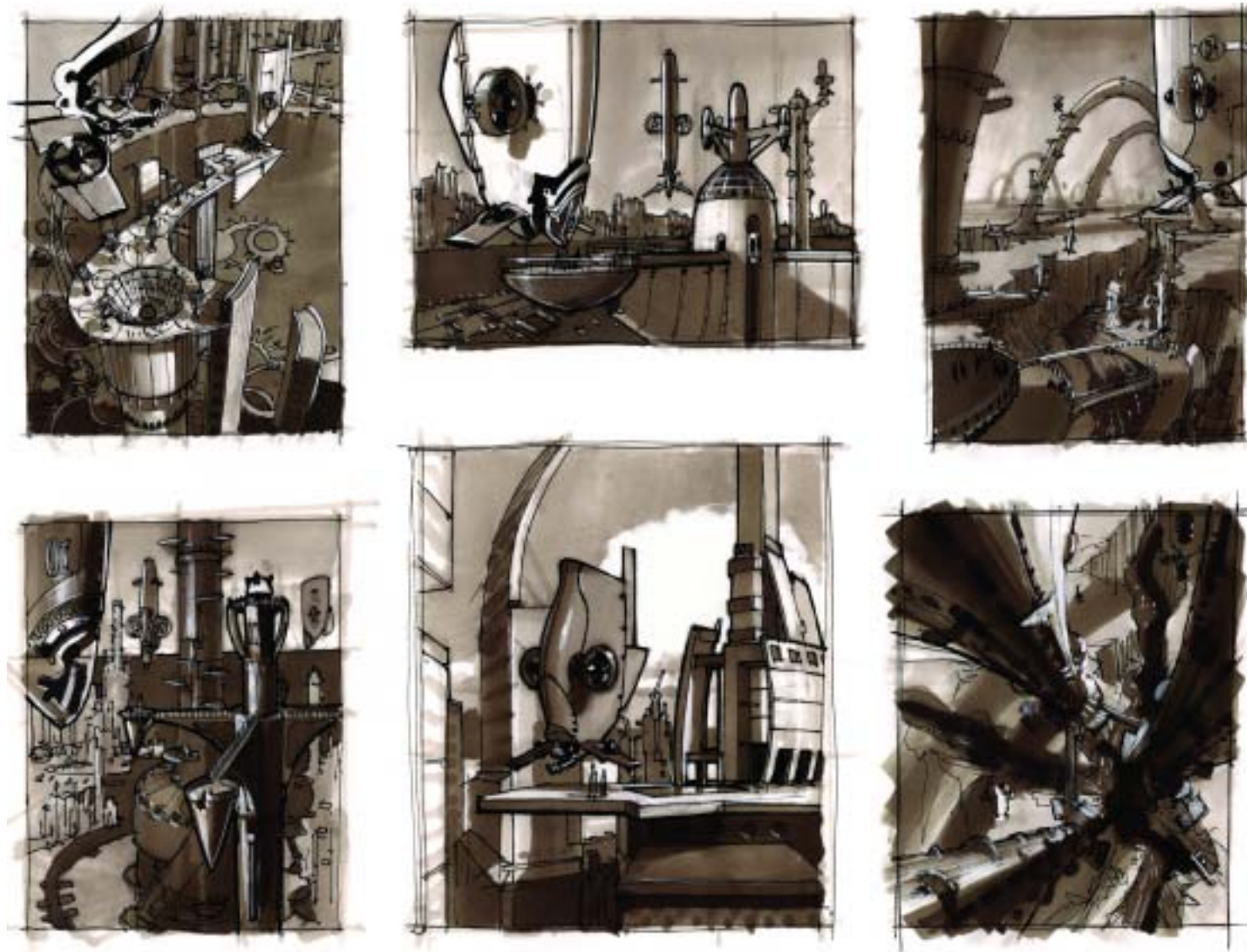
I enjoy trying to draw complicated forms freehand in perspective. I know they do not look that complicated, but they are a bit difficult to draw. The three boats on the right were drawn first on layout paper with a ballpoint pen. The perspectives could still use a bit of refining but for early sketches in this project they communicate what I want them to: general proportion, form and stance while gliding across the water.

The first sketches were overlaid and then drawn lightly again with a black Prismacolor Verithin pencil on vellum. After I had the light line drawing I rendered them with black NuPastel chalk, more pencil, and a touch of white gouache for the seams between the wood decking. I broke out my old ships' curves, laid them down on top of my painting bridge, took a deep breath, held it and painted each line the best I could. This is one of those skills that practice makes perfect, or at least better.

The thumbnails at the top of the page were done after I did the sketches to the right. I wanted to try to drop boat forms into interesting environments for potential color renderings. They were done in the same technique as described in the the previous pages. With this set I spent even less time on the value work and I just used the early marker sketching as a guide when doing my line drawing over the top.







SCOTT ROBERTSON:

Here we start with my fixation with airships during our project. I'm not sure what happened here, I sketched out a couple of fish-inspired solo airships and then they started to multiply. At the heart of this two-page spread and the next was a desire to sketch and render some interesting environments ranging from a canyon landscape to a megacityscape. The upper right color sketch reminds me of a series of St. Louis Arches on steroids. Again, like childhood daydreams, my imagination ran with the adventurous piloting of these airships. I could imagine being cantilevered out the mouth of one these fishy airships far above a futuristic cityscape. I tried to reflect the storyline through the thumbnail sketches first. As before, I find it very fast and fun to lay down my initial ideas for a rendering in this fashion.

The sketches above took me a little longer than the snow vehicle sketches due to the nature of the environments, the detailing and the more complicated perspectives. The size of the originals range from around 2"x3" to

3"x4". I also had fun adding a bit more value rendering to the forms and the environments.

As before, after I had a stack of these I selected a few, scanned them into Photoshop and started painting over the top of the marker thumbnails. The two color comps at the top of the right page each took about three hours and were painted with one brush. They are still very rough as you can see, and I left them that way to share what early digital color sketches look like when I'm doing a rendering.

The larger rendering to the right has evolved quite a bit from the marker thumbnail sketch above. After I had blocked out the new design of the airship I printed it, did a semi-tight line drawing over the top of the print and scanned it back into Photoshop to use as a guide as I continued to render. All of the environment and architecture were painted directly in Photoshop without a line drawing other than the thumbnail above. I imagine the airship shown here is just leaving after making a pit stop.

## PIT STOP







SCOTT ROBERTSON:

## HANGAR 51, HANGAR 47

More airships, this time on the ground. I had the idea that it might be fun to try and do a looser rendering with a couple of ships on the ground drawn as we would see them through a wide-angle lens.

My goal here was to try to pull the viewer into the piece with some cast shadows coming from out of frame. James turned me on to giving these types of cast shadows a try, to make my compositions more interesting. In addition to trying to pull you into the piece I wanted to accentuate the height of these airships through the distorted perspectives.

Both of these pieces were painted directly over two very loose pen sketches. At each new meeting throughout the project I tried to make my pieces more painterly. I have an affection for loose painterly styles—although I have a long, fun learning curve ahead trying to do this myself. I find the tight photo-real rendering of forms and materials quite easy as compared with a looser painterly personal style. Since I am an industrial designer first by training and now through

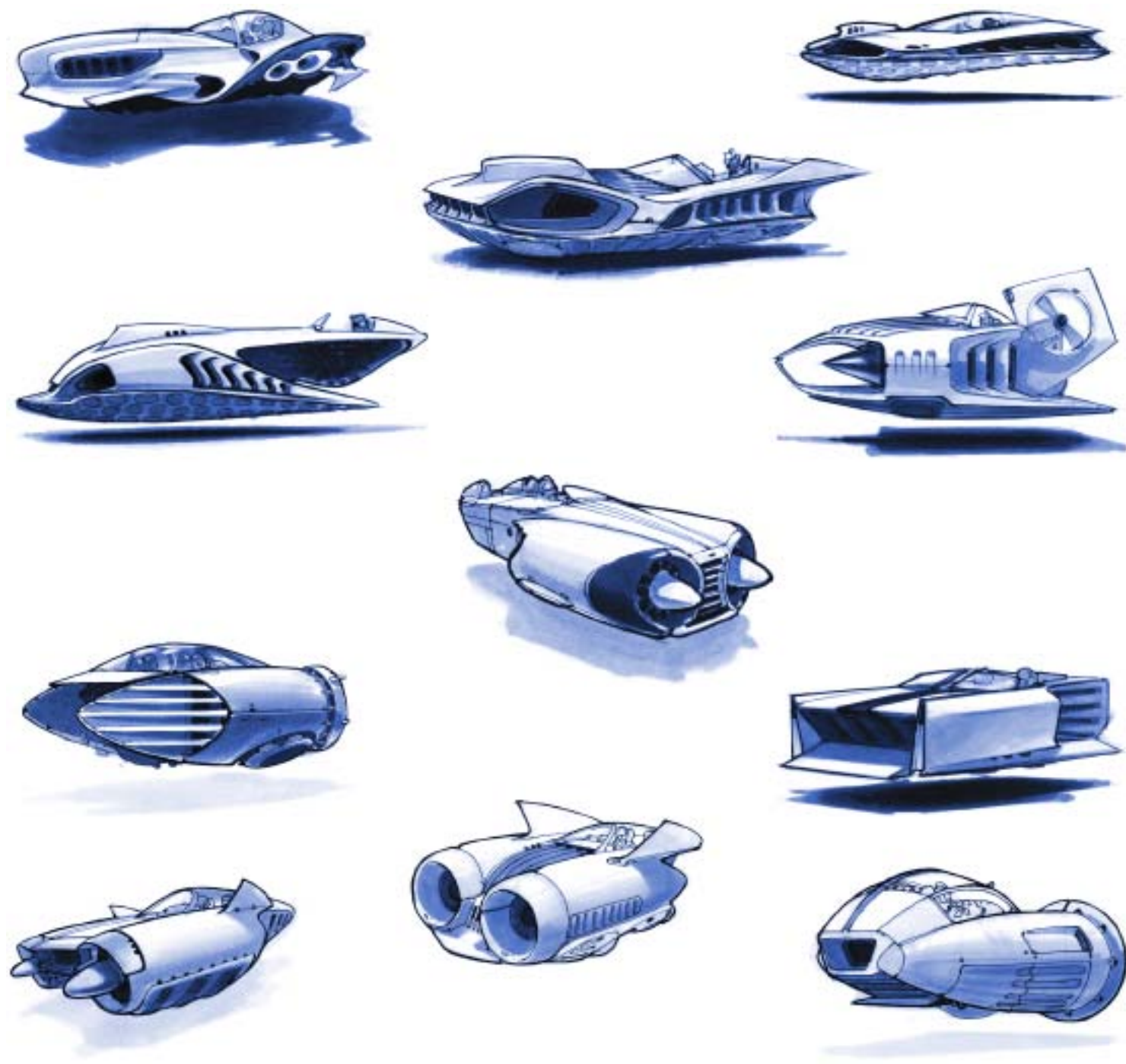
years of practice I have the habit of defining every surface of an object so that there is no question for the modeler building it, nor for the client who wants to know what the product is going to look like when it is realized in production. This is a good thing when doing renderings for product-design jobs but not as helpful when trying to get a little mood and style into a rendering.

I still have a lot I want to learn in developing my painting abilities. This project has been a great forum for me to try to develop my skills, learn from my peers, and experiment with new techniques and ideas about concept design and art.

Both of these pieces represent a painting style I'm hoping to explore more in the future.







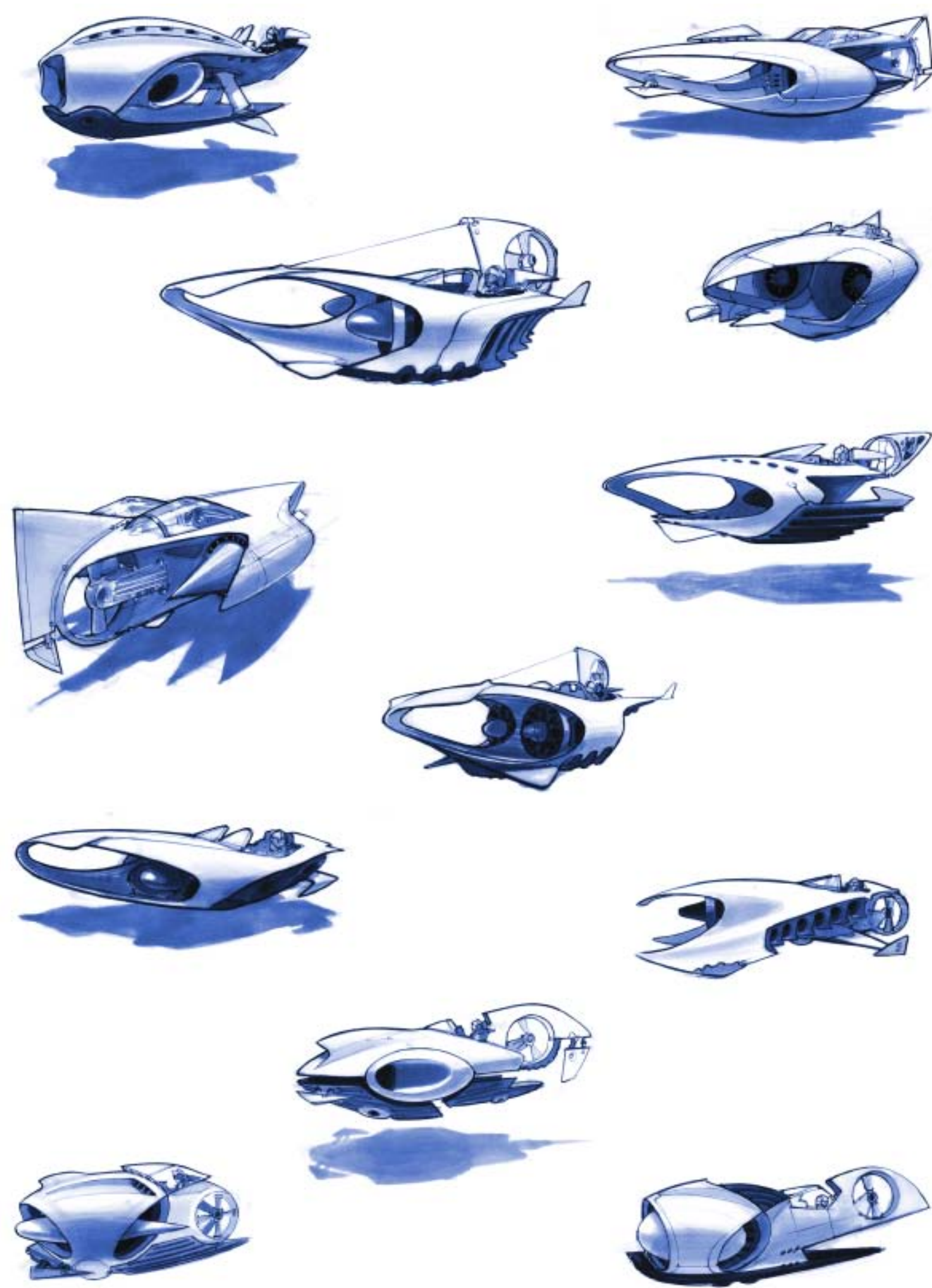
SCOTT ROBERTSON:

Ah, cars with no wheels, hovercraft, or in Spanish “aerodeslizadores.” This subject is one of my favorites to draw and design. I really enjoy doing traditional media thumbnail sketches as I mentioned in the previous pages. I sketched a stack of these to come up with a couple of design directions for the fold-out rendering on page 85. The basic idea behind all of these fantasy hovercraft is that the technology exists for the creation of small antigravity devices strong enough to provide vertical lift for a vehicle. Forward thrust and steering are done with traditional ducted fans and props. This is by no means a new idea for sci-fi vehicles, but it remains one of the most fun to draw and design.

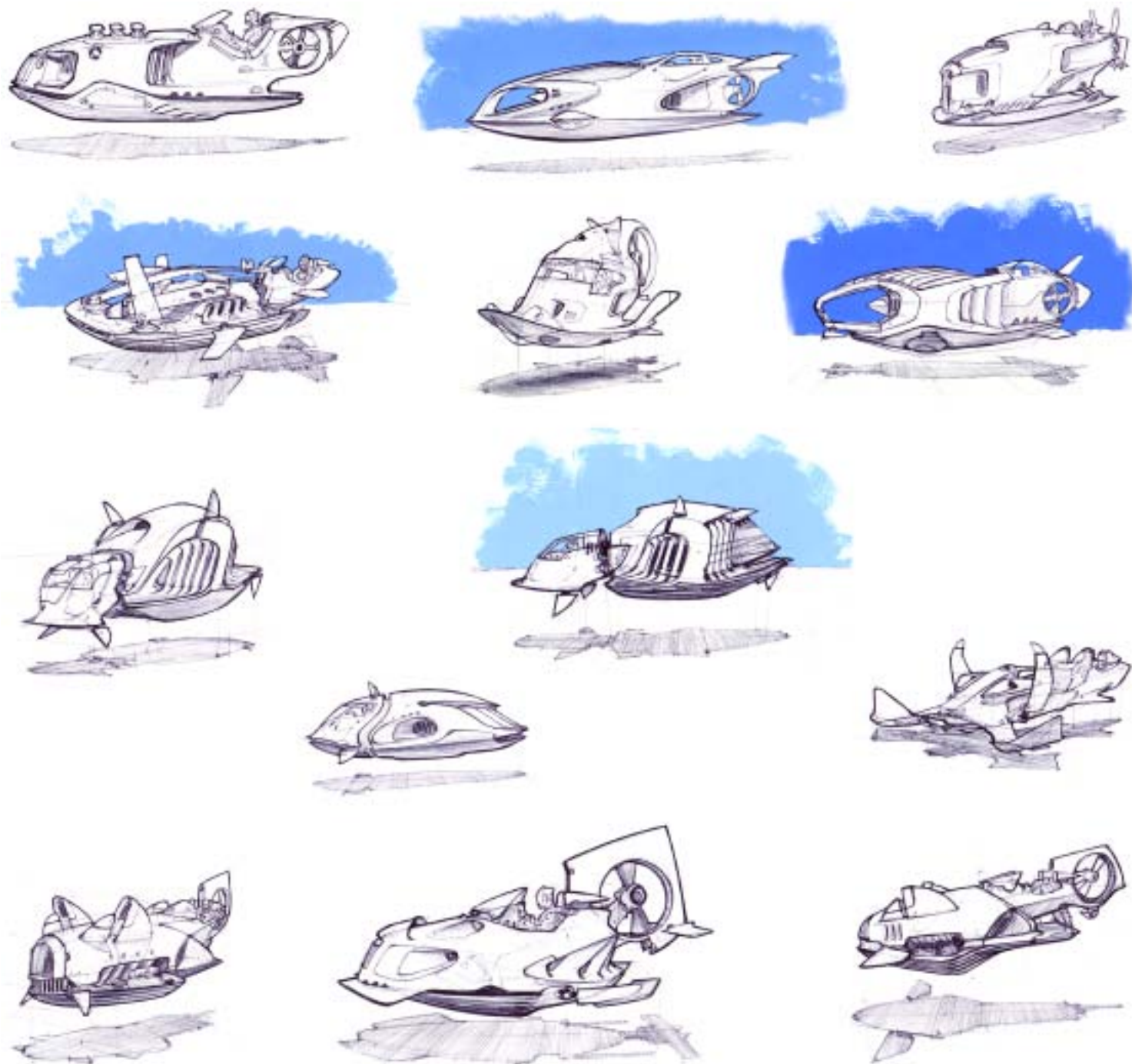
The sketches on both of these pages were done as I have described before. I started with a light value marker, such as 10% grey, to lay down some perspective guidelines for the vehicle. After I had the guidelines in place I continued sketching with markers of increasing value. Typically I begin by defining what I know most about the object. For

example, take the three sketches immediately above. I had in mind that I wanted two large, side-by-side engines to be the bulk of the form for these designs so I began each sketch by roughing in two basic cylinders. After the cylinders were roughed in I added the pilot’s cabin between them and a couple of control surfaces. After I completed almost all of my marker work I went back over each sketch with a little line work to define the designs further and to make the sketches pop a bit. For this line work I have a couple of favorite pens I have been using for years. My pen of choice that works nicely and will not smear when you add marker is the Pilot, HI-TEC-C. It comes in many colors and three line weights. My favorite ballpoint pen currently is the Zebra, JIMNIE LIGHT 0.7. Be warned that this ballpoint pen smears when you add marker over it. These pens can be hard to find in stores, but you can find a listing of retailers for these pens on our Web site. <http://www.DesignStudioPress.com>.

## LOS AERODESLIZADORES







SCOTT ROBERTSON:

## LOS AERODESLIZADORES

Above are even more sketches from the stack I did in preparation for the rendering to the right. This group of thumbnail sketches were done with the Zebra ballpoint pen I mentioned on the previous page. I had chosen a very heavy bristol paper so I could add the blue gouache backgrounds to some of them without the paper warping like a potato chip. I wanted to try using gouache versus marker for my backgrounds for a few reasons; its opaque covering ability, it does not smear the ballpoint lines like markers do and the finer edge control you get from a brush versus a marker tip.

After I drew the thumbnails to work up some design directions I chose a couple of them and did a larger line drawing of the craft racing each other. I wish I had spent more time on the composition. As this was my first project for the book I was more comfortable with straightforward object rendering and less skilled at creating interesting color palettes or compositions. As I'm sure we all know, you are never done learning—so I pressed on with my not so refined

palette and composition. The line drawing I worked over in Photoshop included the reflection of the vehicles, to try and get it as correct as I could. The rendering part of this piece was really as straightforward as it appears. I used all of the basic layering, path, and preserve transparency tools within Photoshop.

I have had a lot of questions about the water. It is made up of a few layers; one for the sandy bottom, one for the water itself and one for the reflections on top of the water. The middle layer of the water was erased to let us see through to the sandy bottom as the water gets shallower in the foreground. The reflection layer was rendered first as if it was on a flat mirror and then I smudged the reflection left and right to make it look like it was on top of the small waves. This was a fun rendering to do, and I hope to do few more like it in a looser style someday.





© Gary Robertson





Garry Robertson





## UNDERPASS

SCOTT ROBERTSON:

This piece was a fun one to do for several reasons. Usually I start with a stack of thumbnail sketches or tight line drawings, but this time I started loosely. I began this piece in Photoshop as a quick color sketch inspired by the imagery of the film “Pearl Harbor.” When I decided to revisit the color sketch to turn it into something more appropriate for this book, I started by redesigning the planes by giving them pusher props at the back and funny canard wings at the front of each. To add some drama I next added the bridge and the city beyond. I was also unhappy with the composition, so in search of something a bit more dynamic I rotated the foreground plane to bracket the boat in the middle ground a bit.

After I posted this piece as a work in progress on several online forums I received some questions as to which way the planes were flying. So good-bye, props and hello, jet engines—complete with obligatory glowing blue centers. In this third snapshot of the piece in progress I added a new

bridge design for which I had done a fairly tight line drawing. I also added some airbrakes on the planes to make them a bit more interesting. In the final piece you can see I changed the bridge design again and had fun doing a loose cityscape in the background directly in Photoshop.

During the painting of this one I took the time to make a few custom brushes in Photoshop which turned out to be very fun to use. The most fun one to paint with was a “water” brush I made that put down about twenty ripples each time I put pen to pad. My techniques for painting the water consisted of downsizing the brush with the bracket key as I painted into the distance while also vertically compressing the tip shape to suggest more accurately the proper foreshortening of the surface of the water. This piece also represents a break from using many Photoshop paths and other tools I employed on the hovercraft rendering, and moves more closely toward traditional painting with digital media.



SCOTT ROBERTSON:

## RETURNING TO HEADQUARTERS

Back to quirky vehicles again. This design is similar to the earlier ones you saw on the “Over The Pass” pages. Again I have rendered up a little cockpit for our driver that can articulate to any angle to help him stay upright and to counter the high center of gravity of the vehicle. I imagined that this type of system would help to offset not only the high center of gravity but also the small footprint of the vehicle. The main differences between this and the earlier design are in the track system. This design works like a tank with dual tracks as you can see.

This rendering started its life as a rough Photoshop scribble of big shapes and colors. Once I had the composition blocked out I threw down a layer over the top of the sketch and dropped in some perspective guidelines. After spending a couple of hours refining the design of the vehicles and the buildings, I saved a version of it and sent it to James via e-mail. I was looking for general comments but specifically for help with the composition. He did a quick

redline over my image and e-mailed it back to me. I reworked it based on his input and then proceeded to tighten it up a bit.

This piece was done near the end of our project and I was using fewer and fewer layers, paths and other Photoshop product rendering techniques I normally rely upon. I rendered this one with two brushes—one for the sky and snow and another for everything else. I used no paths; instead I opted to paint everything freehand with my Wacom tablet. Renderings go much faster this way and I hope to keep developing this style of rendering, which is much closer to the way one uses traditional media.





## NICK PUGH



Nick Pugh is an independent concept designer, engineer and fabricator whose mission is to do advanced design and research in transportation, entertainment and architecture. Born in Paris, France; he attended schools in England, Rio de Janeiro, and Berkeley, California and spent long summers on the family farm in New Hampshire collecting snakes, building forts and swimming. With a fascination of nature, art and science fiction he began designing and building his ideas at a young age with an obsession that continues to today. After a receiving a high school diploma in partying, Nick went on to Art Center where he received a B.S. in Transportation Design. Upon his completion of Art Center he decided that his love for car design outweighed his discomfort with the corporate culture that controlled it, and he began what has become a lifelong quest to realize the ultimate possibility of “a unique car design for every individual customer.” Nick is a co-founder of NGV-USA, and has created a patented fuel storage chassis that significantly increases the range of natural gas and hydrogen-powered vehicles. This ARPA-sponsored project culminated in the first unsupported drive across the U.S.A. in a dedicated NGV and is currently being further developed by Chrysler.

His work in the entertainment field includes projects for Warner Brothers, Universal and Hearst Entertainment. He currently is contracted as a concept artist at Rhythm and Hues Studios on projects ranging from TV commercials and feature films to motion rides. He was instrumental in the design of Scooby in the new “Scooby Doo” movie. His latest credits include “Men In Black II,” “Daredevil,” “X-Men 2,” and “The Cat In The Hat.”

Nick's work has been published in *Wired*, *Omni*, *Metropolis*, Los Angeles *Times* and other publications, and he was a featured guest on the recent TV show “The Ride Of Your Life.” He is a central figure in the new book *Build the Perfect Beast* by Mark Christensen, which chronicles the building of Pugh's first personal concept car—the XENO III—that was unveiled in January '02 to over 600 guests and media at Art Center. Nick's work bridges the gap between the world of exotic artistic design and that of the hands-on production engineer. Nick Pugh is married and lives in Long Beach, California.





NICK PUGH:

The process of inventing new design language is a constant goal. When successful it defines a new context that many things that follow can fit within. It can be inspired from abstract conceptual sources, practical functional needs, new scientific discoveries, or by simply rolling the pen over the paper with a meditative intensity and waiting for that next line to unlock a mystery yet to be revealed.

This piece, and much of my work for this book, is sketched out using a technique I refer to as “single line.” This method is done by drawing the picture with a single set of strokes, when the pen touches the paper the line that forms is it. There is no layout drawing or block in sketch, no erasing or rework—just solid continuous lines. I choose this method to eliminate ambiguous and unsure “chicken scratch” and to break free of the volumes to which normal perspective layout can confine the resulting design.

These designs are for a corporate conference environment that combines dynamic physical activity, entertain-

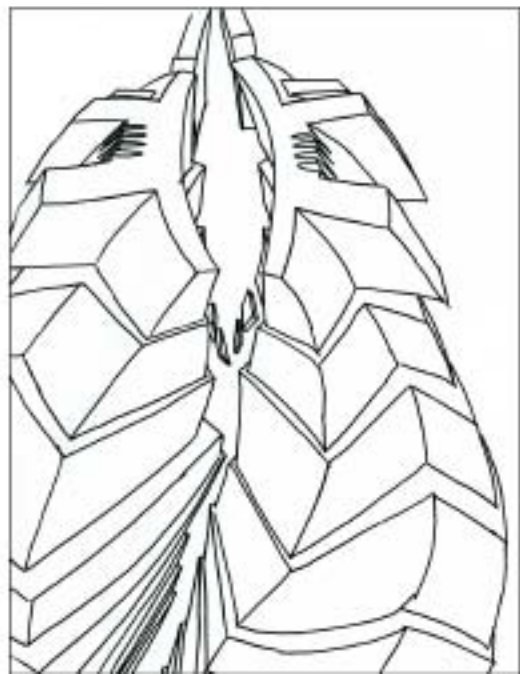
ment and presentation. The complex activity center floats in a simple spherical chamber that new ideas are projected on to as presentations are conducted. To stimulate action and eliminate the stale culture that corporate environments are often plagued with, kinetic activity between the structure and its inhabitants is fulfilled through exercise-as-you-work interior systems. Lighting, texture and color changes as the mood of the employees evolves over each day, week, month and year to maximize happiness and productivity.

# ARCHICURVE



NICK PUGH 01



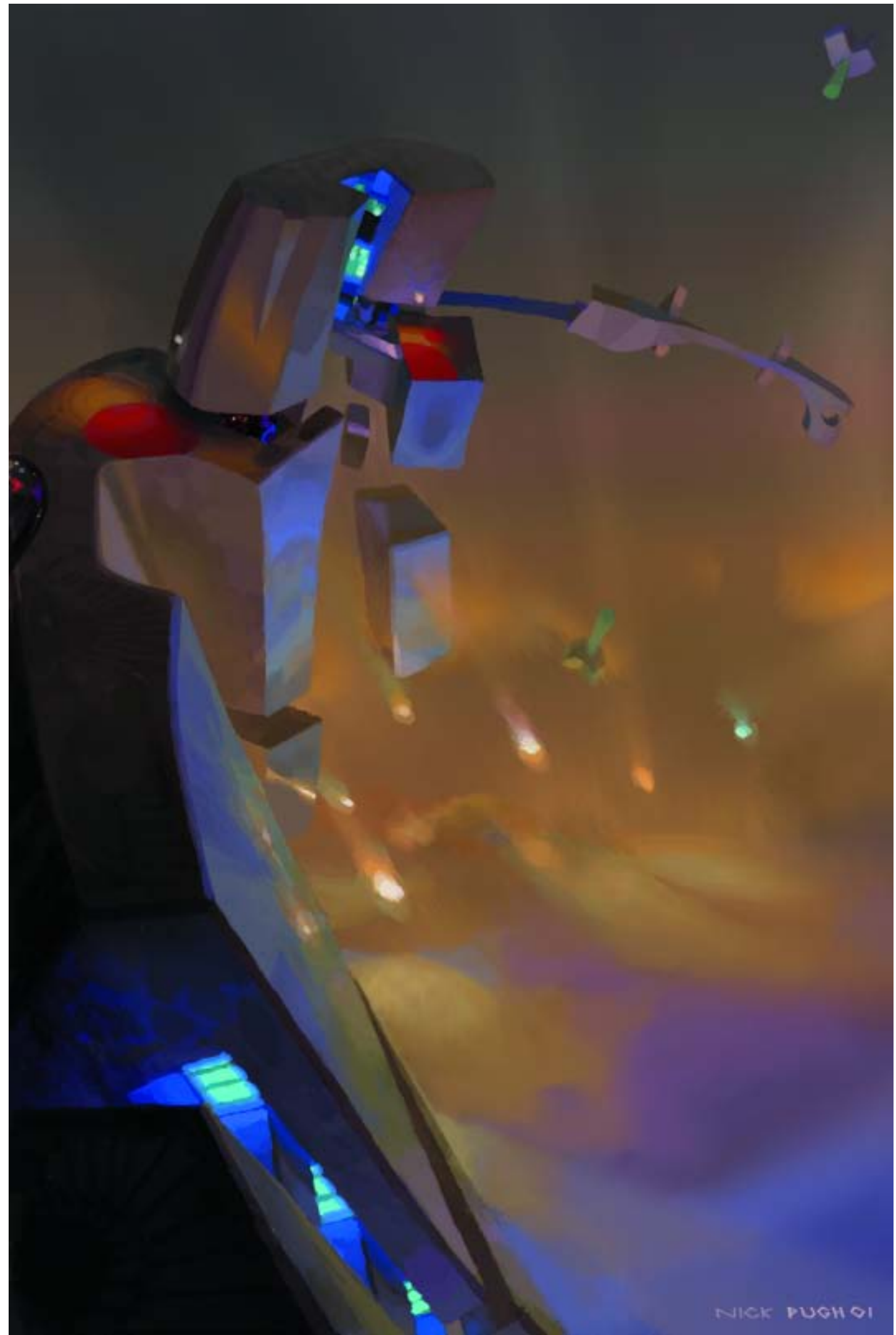


NICK PUGH:

These pictures are further explorations of a pure design language experiment. In this case I also am using “graphic block in” of negative and positive form to define new direction as well as single-line sketching.

Many of the places that are defined in these abstract architectural studies are intended to exist in our current time rather than in a futuristic otherworldly science fiction scenario. The above line art is of self-lifting accordion sky penetrating office blocks. As the occupancy rate increases, the top segments subdivide into more real estate space growing up through the clouds as the need arises. The digital illustration to the right is a new complex built just to the north of LAX that serves as a remote annex of the current Encounter restaurant. The observation level rises above the ever present marine layer reaching out toward the air craft as they pass into the fog, bringing the patrons as close to the passing vehicles as possible.

## ARCHICURVE 2







NICK PUGH:

## GEO-ARCHITECTURAL SPACES

Above: Outdoor mall, Line art.

Right: Indoor Mall.

Over the years, graffiti and the illegal street art culture that produces it have influenced the form in my designs. The dynamic, free shapes in this type of expression combined with the purity and exuberance of its non-commercial execution and the application of this vernacular to the depiction of non-representational typography have great appeal.

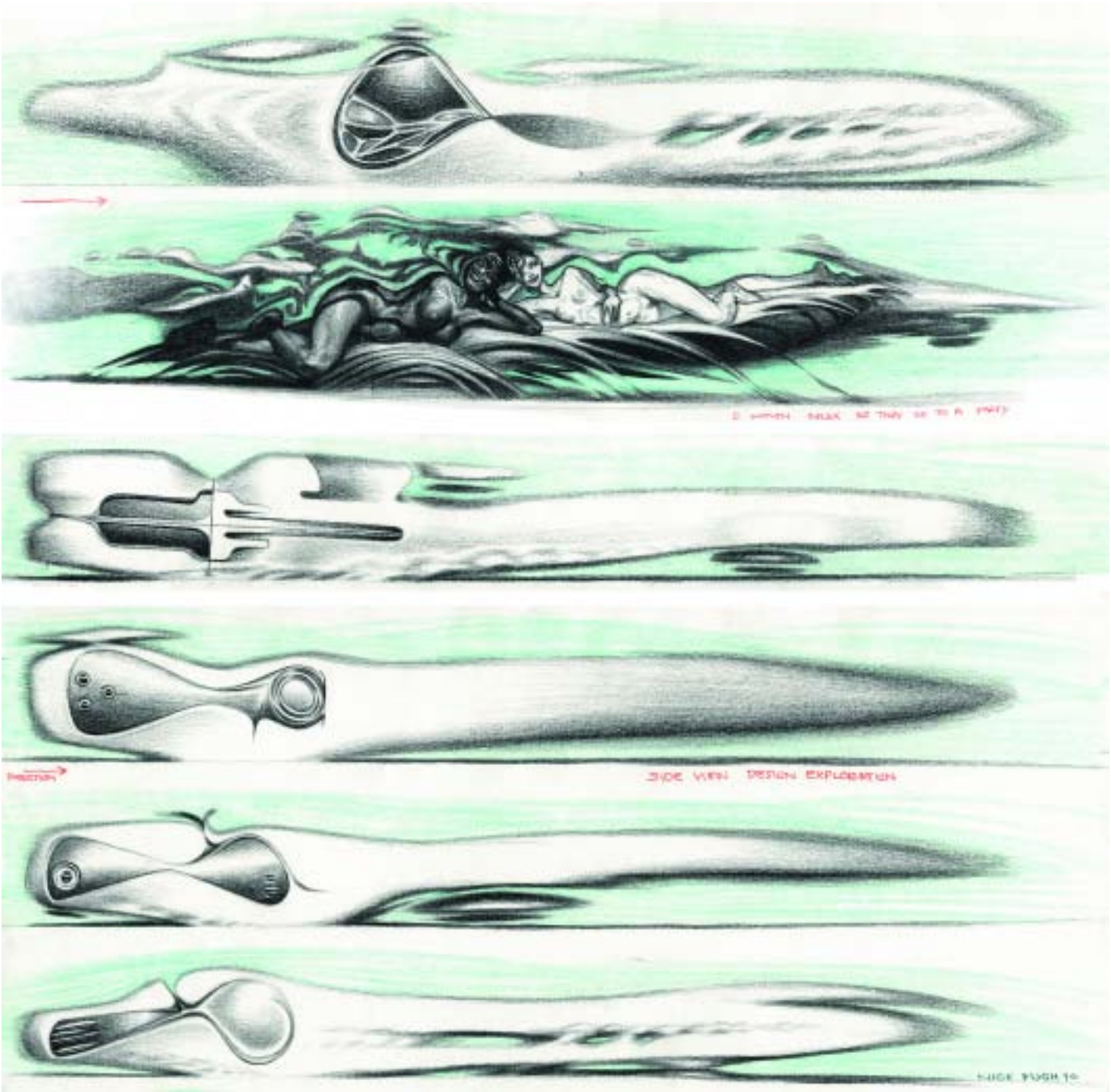
At the dawn of the new century architectural space is becoming ever more sculptural. Technology that is now in its infancy will allow this type of design, which is now largely impractical, to become an inexpensive and realistic solution. The illustrations depicted on these pages are the interior and exterior of a shopping center in St. Louis, MO. It is a place where the consumer buys new products through a series of porthole kiosks where their desires are converted directly into an object that is produced immediately to order

on sight while they wait. The entire interior of this space rotates in a helical pattern slowly around a floating lattice of walkways and stores.

The above exterior color sketch was produced using an analogue/digital feedback technique where the picture is scanned, printed reworked and rescanned repeatedly in a similar fashion as some of Mark's work.







NICK PUGH:

The vehicle becomes a soft vessel of transportation for the human body. It has a new animated quality allowing it to navigate through complex and dangerous conditions at high speeds without harming its occupants. Its outer layer is a gaseous cushion that separates the internal systems from the surrounding environment with an atmospheric layer that is in equilibrium with the surrounding air. Aerodynamic conditions are concentrated into internal ducting that controls the drag, down force and cooling while the exterior boundary of the vehicle is static with the environment. The vehicle is held to the ground with a variably controlled active contact-patch drive surface.

The intersection becomes a fluid stream of cross-traffic where neither vehicle flow has to slow down in order to pass. The stoplight becomes obsolete. The vehicles communicate their occupant load, speed, inertia path and direction among themselves as they constantly reform their shape, density and internal structures allowing the passengers to fly

past each other at very close range without injury. The front tip of the vehicle is an inverting tubular structure that folds over itself as it moves through space. As the front of the vehicle moves forward the tube inverts at a rate proportional to its speed, making its exterior static with the environment. This makes it impossible for any two vehicles to have a front-end collision, as their front tips always roll past each other as they make contact. The crowded roads become safe for pedestrians as they intermingle with high speed traffic, touching and walking through the vehicles as they pass.

These sketches were done using Prismacolor and mark-er on bond paper. They were originally produced for an article on the future of transportation design for the *New York Times* in 1996 but were rejected because they were considered “too far out” by the editor.

# CLOUDCAR







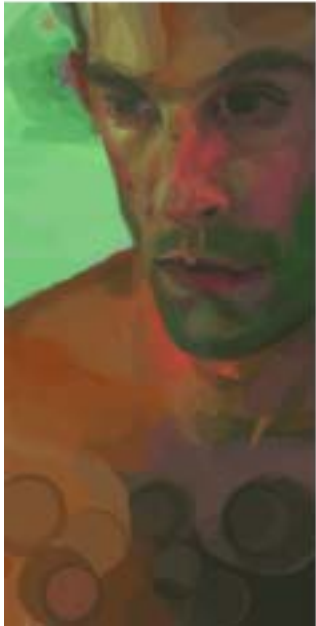
- Above, left to right:
1. Needham, Massachusetts, Christmas 2001.
  2. The W Hotel from Tina and Dave's apartment in Gramercy Park, NYC, Christmas 2001.
  3. Breakfast at Lillian's house in Summit, New Jersey, Christmas 2001.
  4. Tina and Dave's kitchen, Christmas 2001.
  5. A building from Tina and Dave's apartment, July 2002.
  6. A photo my wife, Eileen, took of me "painting" the scene.
- Right: (all on this page are at my home in Long Beach, CA)
7. Back fence at night, May 2002.
  8. Jacaranda in bloom May 2002.
  9. Paul Kirley's painting at 7:00 p.m., May 2002.
  10. Back yard at night, Oct. 2001.
  11. Bougainvillea at sunset, Oct. 2001.
  12. Mirror.
  13. Self portrait.
  14. My easel set up and Mac.
  15. Front walkway, Aug. 2001.
  16. Side yard from inside family room, Aug. 2001.

The physical freedom that a laptop computer affords allows new ways of capturing a picture of the world around us. Somewhere between a camera and a canvas it frees the digital artist from the dark static confines of a desktop environment and allows an immersion into the reality of light, atmosphere and space that is best taken in live. The following images were painted using a Ti-Mac G-4 running Photoshop using a mouse touch-pad or tablet. None of these

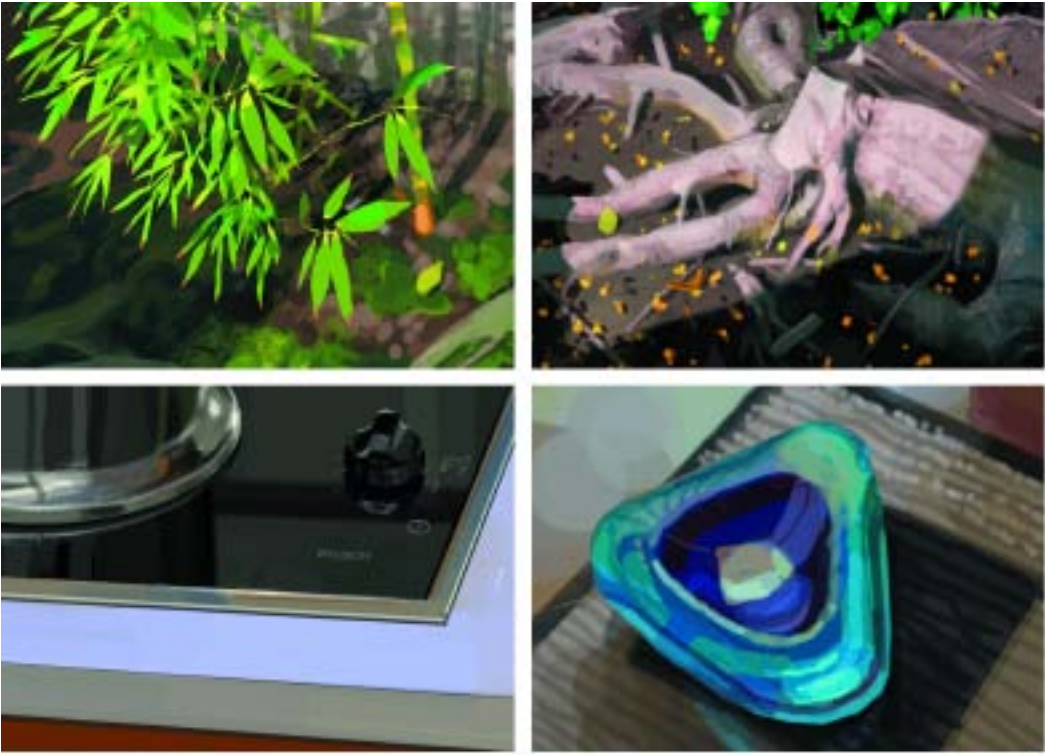
## DIGITAL PLEIN AIR PAINTING

images are manipulated photos; they are all painted on-site directly from what is seen with the exception of one that was copied from a photo. They each took between 10 minutes and 2 hours to complete.

Above, on this page, there is a photo of me painting a still life. This picture shows the essential tools of this technique: laptop computer, Wacom tablet and Photoshop. To the right, the self-portrait shows me painting on a modified watercolor easel, giving the itinerant artist the freedom to set up anywhere. The first step in the process is to develop a good set of color swatches or palettes. These colors should represent the full spectrum and be within the printable area of the Color Picker. Once the working environment is set up it is time to paint. I tend not to do a line drawing or layout, preferring instead to lay down big blocks of color and value, defining composition and space. This speeds up the process and immediately gives a picture similar to what you see there in front of you.







- Above:

  1. Bamboo in backyard, Aug. 2001
  2. Stump in backyard, Aug. 2001
  3. Our cooktop
  4. Ashtray from Paula B., July 2001
  5. Sunset from side yard, Sept. 2001.

Small horizontal images (Belmont Shore, California):

  7. Oil island 10:00 a.m. April 2002
  8. Lighting sequence showing similar views at different times, Jan. 2002
  9. Night shots of Huntington pier and oil platforms.
- Right:

  10. Kitchen at the Shore apartment
  11. Hot night moonrise 1 Aug. 2002
  12. Hot night moonrise 2 Aug. 2002
  13. Light
  14. Francis and Eleanor Coppola at the Niebaum-Coppola Winery Feb. 2002.

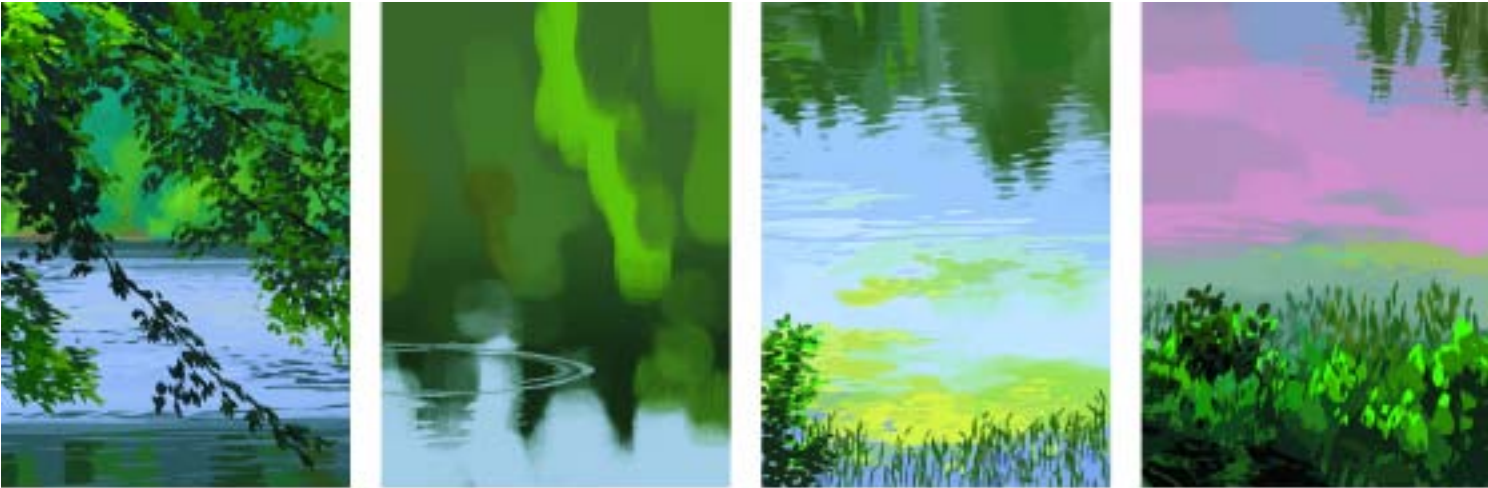
## DIGITAL PLEIN AIR PAINTING

To keep the painting as live and fast as possible, each image is usually created as one layer and added to the same file as the work progresses. This minimizes the need for extraneous operations and keeps the artist connected to the subject. The first step is to fill the entire field with a single color or gradient at 100% opacity. Then choose a brush or line tool and paint at 80-100% opacity. More transparent settings will slow you down and often generate a muddy look. Once

the volumes and colors are blocked in I often use a gradient, set to multiply or color dodge at low opacity, to bring a subtle color/value shift across the whole image. As the painting progresses it becomes more practical to sample from the colors in the image itself, rather than from the pre-set palettes, to build up detail and texture. When the painting is done, make a new layer and start the process anew.

If perspective is an important part of the composition then a pre-made grid may be useful. This is best done using a grouping of oversized paths that can be moved around over the image to the desired position. Generic path sets are created in another file and copied into the paint file when needed to plan or confirm perspective. Here I have used 1-, 2- and 3-point perspectives and a “fish-eye” grid as well.





Above:  
1. (top 4 images) Loon pond at sunrise, July 2002  
2. (larger single image) Nausset Beach peninsula and island painted through binoculars, July 2002.

Right:  
3. (top 4 images) Boats at sunrise Pleasant Bay, Cape Cod, July 2002  
4. (bottom 4 images) Afternoon at Pleasant Bay, Cape Cod, July 2002.

Just as with traditional plein air painting, the inconsistency between what is seen and what is painted creates a constant challenge. The LCD monitor rarely shows color/value intensity similar to what the eye can perceive. This is exacerbated by ambient light reflecting off of the screen, further obscuring the work in progress and skewing the image toward an overly contrasted look. Often the most exciting scenes are outside in the bright sun and therefore demand methods to compensate for the inadequacy of the hardware.

I find that if you are outside or in bright light, it is essential to have your back toward a dark object or shadow, thus minimizing screen glare. A photographer's hood seems like a good solution but I found it almost impossible to tran-

sition from the dark to the light and keep any sort of accurate color or value consistency. Avoid making the images too high contrast. This often occurs as a result of the monitor's color appearing washed out, and the resulting artistic compensation tends to concentrate the value at the extreme ends of the spectrum. To some degree this is unavoidable and can be used as a stylistic choice; just always double-check where your colors are in the Color Picker if there is a scene that pushes the hardware out of its functional range.

Speed is of the essence in this technique as the natural world around you is constantly changing, so simplifying and streamlining your technique is essential.







Above: Kangaroo house, Cruise ship  
Right: Church, Macon GA

As common materials become ever stronger relative to their weight they reach a point where the structures they form are lighter than air. This allows designers the freedom of inverted form and free ribbon-like members that seem to defy gravity. Twisting and gently swaying in the wind, these grand forms expand and contract relative to weather, heat and occupant needs.

The material wall thickness is so strong and thin that it forms a cell lattice foam that creates vacuum space within it, making objects made of this material float in the ambient environment. Sliding tetrahedral sheets of flexible carbon-diamond lock or release as the buildings breathe and move.

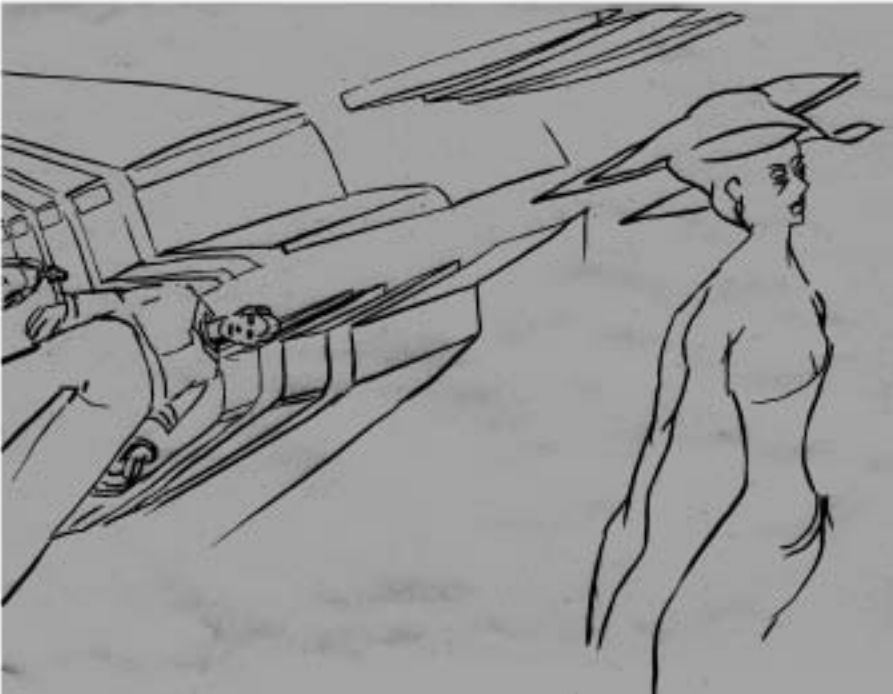
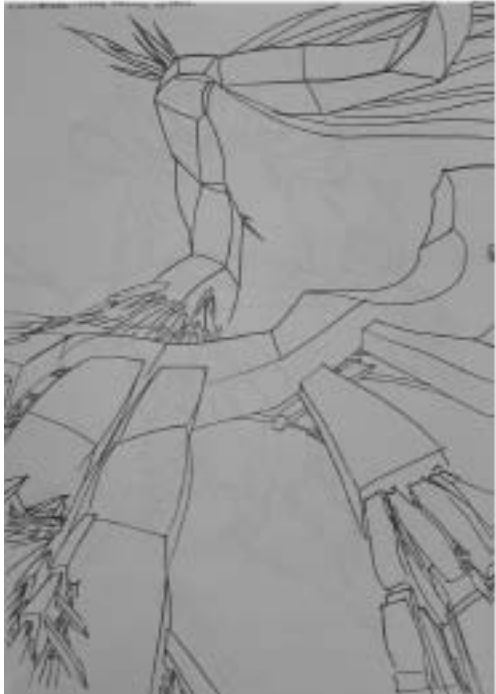
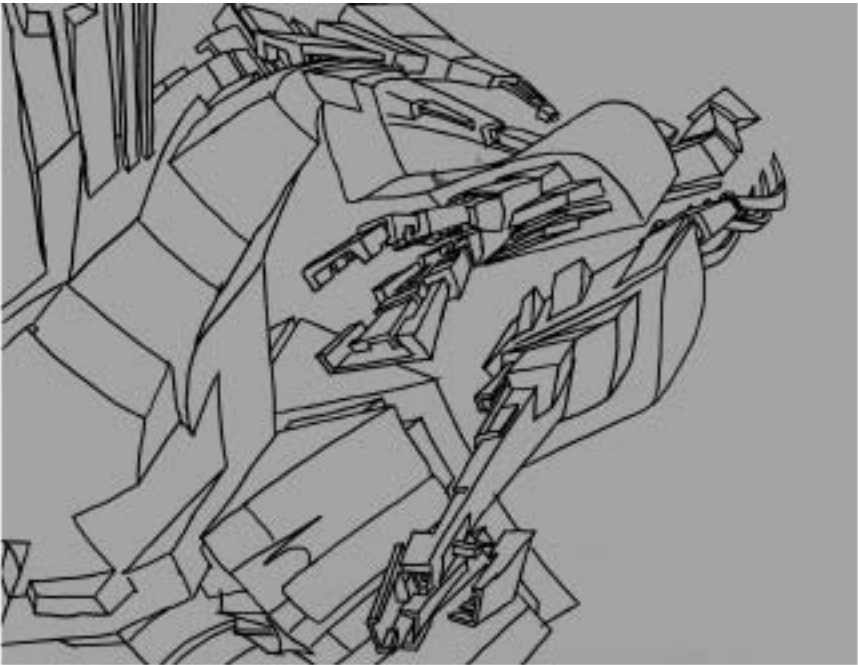
The above sketch paintings were created with gouache, pen and pencil as color comps bringing “single line” art closer to the final piece that was then rendered digitally. In

## NICK PUGH: WINDING POLYP TRUSS FORMATIONS

the picture on the right, fragmented spiral stairwells lead the worshiper within this cathedral into a vertical maze of spiritual stations that represent the ascension to heaven through steps in a virtuous and generous life. As they pass up through this structure they are enlightened to a universal spirituality that transcends any specific religion. A floating holographic icon of each of the world's major religions changes from one to another as world events change public awareness and demand compassionate understanding.







NICK PUGH:

## EXPANDING HYPERBOLIC PERSPECTIVE

Structure sprouting from Treasure Island, San Francisco.

Our current understanding of space through Euclidean geometric perspective has been the dominant method of visualizing 3-D space since the Renaissance. The underlying assumption that the true nature of perspective is based on simple geometry, and can be best described through employing techniques based on primitive shapes such as grids, cones and spheres, has had a profound effect on how we see and plan what we build.

It is becoming evident that there may be a more intricate and detailed language of perspective that is based on other mathematical ideas that have not yet been employed as a technique of visualizing 3-D space on a 2-D surface. When observing nature, notice how there are no grids or pure primitive shapes forming without man-made intervention. Hyperbolic geometry, fractals and string theory are a few examples of mathematics that may point to a deeper perspective that is not an abstraction but a more true depiction

of universal spatial truth.

The following statements are intended to engage this possibility:

- \* Space expands apart as it recedes from the viewer's POV.
- \* There is an infinite possible field of vanishing points surrounding the viewer's sphere of vision.
- \* The fabric of space subdivides and branches as it recedes.
- \* There is no horizon, up or down.
- \* Objects can be viewed from many angles at once as space unfolds.
- \* There are no true straight lines.





NICK PUGH:

## CONCEPT PAINTINGS

The use of simple graphic language can be a valuable tool in the research of new form. The proportion and color spurs you on to think of things from a new vantage point. The enamel graphic studies above are yet another attempt to capture space in two dimensions. They are intended to represent a fluid, interconnected place where color and form are seen as graphic shapes.

The image on the opposite page is an attempt to describe further geo-architectural space using oil paint as the medium. This structure is a space station hovering just above one of Saturn's rings.







NICK PUGH:

## INTERSPACIAL SUBSTRUCTURE DYNAMICS

Above: A Batmobile?, A Lincoln?

Right: House; Palm Springs, California

Architectural and vehicular formations evolve whose exterior form does not reflect the interior volumes that are within. The true dimension of the space we live in is revealed to have a much higher buildable density than is currently evident. These structures have a much better material “real estate” value as a result. An object that looks like a spindly sculpture can house a theater, a thin-looking wall contains an office complex and a small transparent sphere is a huge solarium.

The vehicles in this time are drastically collapsible. Elegant and menacing at speed, they fold into supple sheet-like surfaces that disappear into the surrounding environment when parked. The new design language consists of an actively animated chaos of shards, ripples and undulations as the vehicles’ shapes change when they move.

The foldout picture was rendered using color reference from a photo taken by Randy Jensen of the Flamingo hotel in Las Vegas. It started as “single line” drawing on paper and was then scanned and inverted forming a complimentary color underpainting. The reference photo was used as a palette to sample color from and then the picture was painted using custom brushes.





NICK PUGH 01





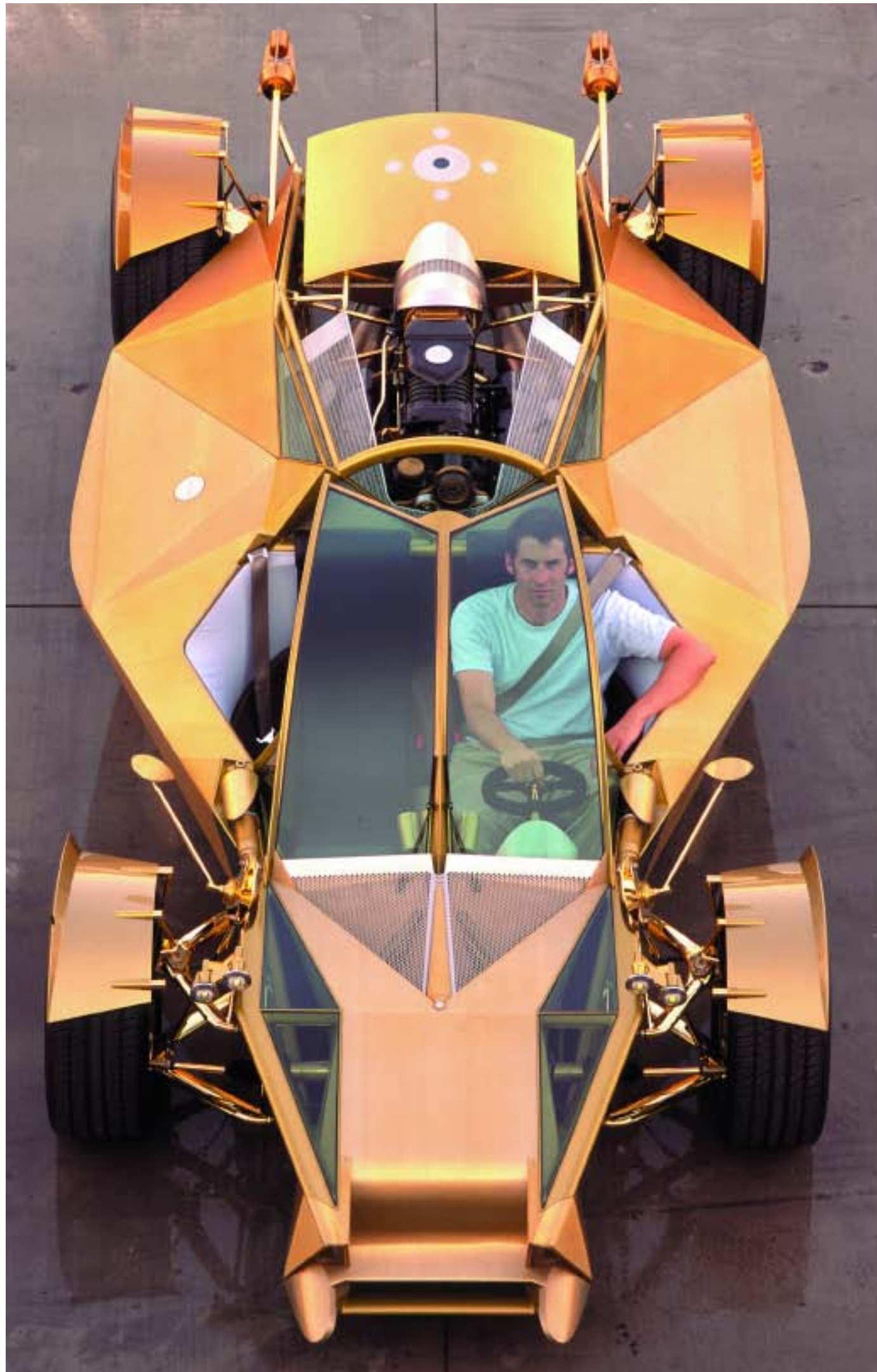


Photo: Andrew Yeadon

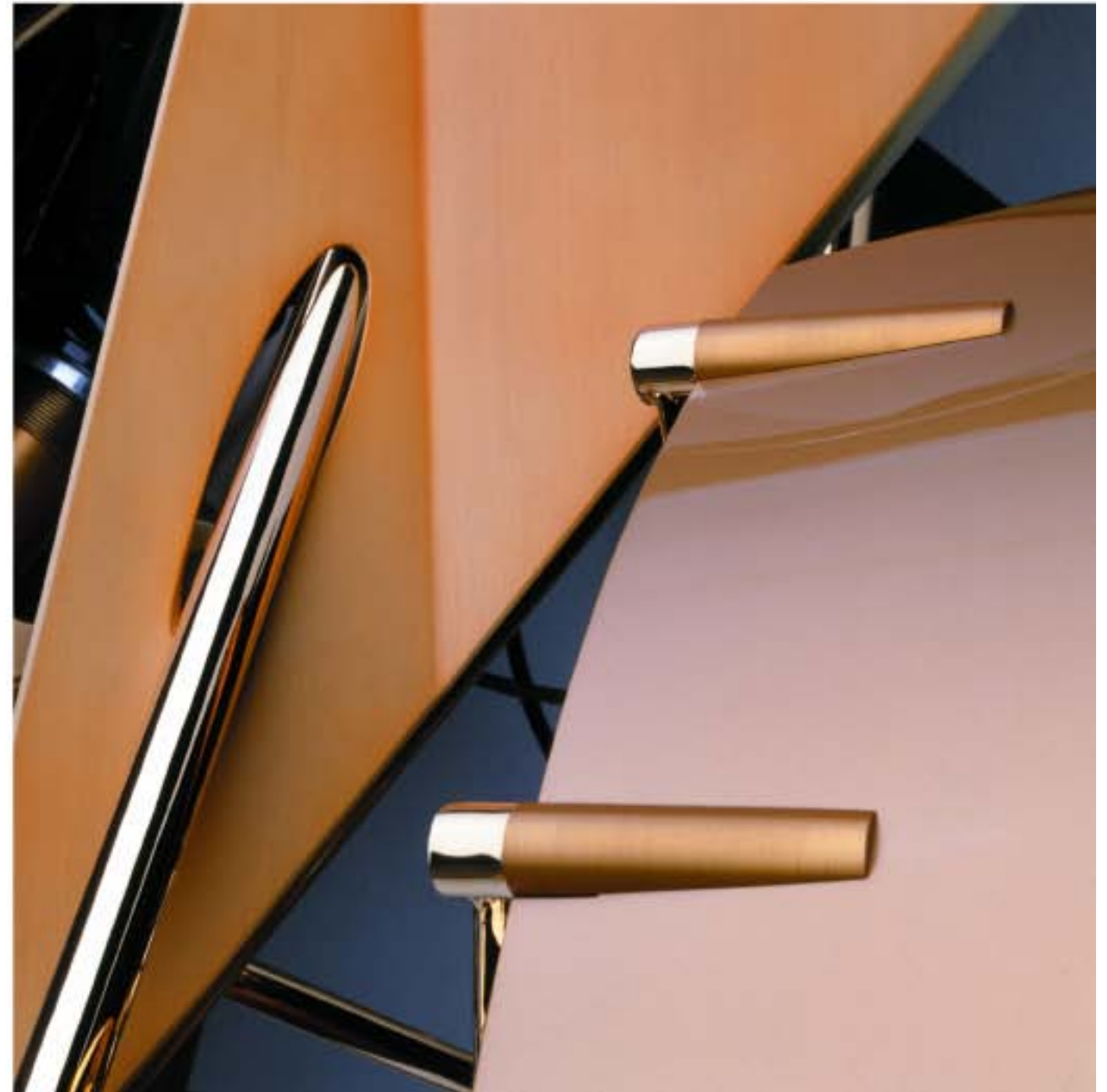


Photo: Steven Heller





Photo: Steven Heller

## THE PERSONAL CONCEPT CAR

Above:

Windscreen detail

Left:

1. Me in the XENO III

2. Roman Coppola and his vehicle

3. Rear fender detail

The personal vehicle of today becomes the personalized vehicle in the future. Early technology in Rapid Prototyping and CAD are setting the stage for the practical potential of inexpensive mass customization of products and vehicles. The design and engineering process is linked directly to the customer's specifications and a robotic cross-branching assembly plan integrates the custom parts into the mass production flow of vehicle construction.

The gold sport-concept car in these photos is the XENO III. It was created as a flagship of individualism and eccentricity. It is a functional street car as well as a sculpture that represents a coming golden age of variation. It is the result

NICK PUGH:

of a decade of struggle and love in pursuit of the dream of creating the purest car design statement an individual designer could hope to achieve.

The glossy black Scarab, above left, is a proposed vehicle design created in collaboration with Roman Coppola. It combines the driving excitement of a luxury sports car with the package of a personal limousine creating a dual-use vehicle architecture not available in any other car currently produced. It realizes the next evolutionary step of the personal concept car idea in a creative synthesis between the designer and the client, resulting in a new vehicle design that could only be conceived with the intimate involvement of its eventual owner.





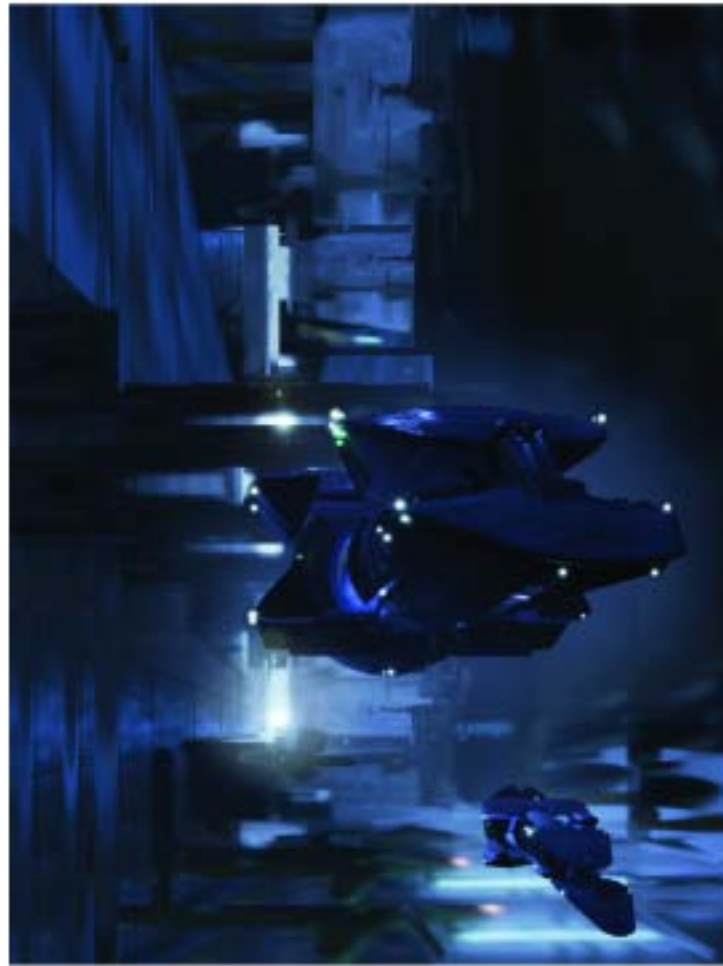
# STEVE BURG

Steve Burg was born on the east coast and was raised in the woodland suburbs of northern New Jersey. Intent on a career in the field of Visual Effects, he attended the Film Graphics and Animation program at the California Institute of the Arts. He began his career as a visual effects animator, branching out into miniature construction, photographic effects and matte painting on films such as “Dreamscape,” “Buckaroo Banzai” and “Beetlejuice.”

Burg segued into the design field following an introduction to director Stuart Gordon, who hired him as a conceptual artist on “Robot Jox.” There he worked closely with Ron Cobb, who soon became a de facto mentor. Cobb hired Burg as a conceptual artist on George Cosmatose’s “Leviathan” and James Cameron’s underwater epic, “The Abyss.” Burg went on to furnish designs and storyboards for several of Cameron’s subsequent projects (“Burning Chrome,” “Terminator 2,” “T2-3D”), while branching out to work on Paul Verhoeven’s “Total Recall” and “Starship Troopers,” Kevin Costner’s “Dances With Wolves” and “Waterworld,” Robert Zemeckis’ “Contact” and numerous other film and television productions. He is now well established as a versatile designer/illustrator with a thorough knowledge of film production and visual effects methodologies.

Self-taught in traditional illustration, Burg has embraced the medium of 3-D computer graphics as an ideal confluence of his varied interests in art and design, model making, animation, lighting, photography, and visual storytelling. He lives on a quiet tree-lined street in Pasadena, California, and strives to maintain his personal development as an artist in addition to his ongoing work in the motion picture industry.





STEVE BURG:

This is a view of a berth that's part of a much larger zero-gravity shipyard complex. Four military ships have arrived and are being moved into docking positions as service crews prepare to carry out a refit.

I started with a fairly abstract background that was made quite simply by airbrushing some random color and then stretching the image vertically by a factor of about twenty. This gave me the vertical planes, and suggested an overall environment. I decided on a vanishing point and worked intuitively to develop the background, allowing areas of light and dark to take on more specific form gradually. By this time I had a better idea of where the image was heading. As the background began to crystallize, the spaceships were mocked up and rendered in 3-D, with the resulting elements brought into Photoshop as layers. The image was then fine-tuned to resemble a unified illustration rather than a collage of pasted-in elements.

As with a number of the images I've done, there was no

definitive line drawing or sketch. When working on my own recognizance, I prefer to allow an image to grow organically from the painting process itself. This is all well and good with a landscape or other natural setting, but can be a little bit tricky when dealing with a technological or architectural environment where a flaw in the perspective would be glaringly obvious. Fortunately, this piece lent itself to a one-point perspective approach. Two guides (one horizontal, one vertical) were positioned like crosshairs intersecting at the vanishing point, and all the major volumes were defined by anchoring the selections and edge lines to this central point.

## IN THE YARDS







STEVE BURG:

A group of spacecraft gathers within a vast trans-dimensional switching station, poised to resume their journey. Visible in the distance is a part of the mechanism that enables such voyages. The spherical forms are meant to suggest containment vessels of a monumental energy source. The gateway itself is only hinted at by the faint glow rising from the lower left corner of the frame.

In this glimpse of a far-distant future, the ocean of space-time has been mastered. But are the architects of this scenario human, or are we long forgotten?

This image was created entirely in Lightwave 3D. The process of “sketching” in 3D involves modeling basic shapes and refining them gradually as more detail is applied. Numerous test frames are rendered to check lighting, color, composition and detail. The various elements of a scene undergo hundreds of adjustments until the desired result is achieved. It’s time consuming, occasionally frustrating, but ultimately I find it to be very rewarding.

## GATEWAY

This particular image is basically an attempt to depict colossal scale in the absence of any familiar points of reference. The main shapes of the composition were deliberately kept very simple and graphic, while the impression of detail was created primarily through the use of texture maps applied to the 3D models. Actual surface relief and “techno-bits” were kept to a minimum so as not to break up the lines of the ships too much. Hopefully, the overall effect imparts an appropriate sense of mass and scale.







STEVE BURG:

This image is set on a habitable planet in some other solar system. Engaged in the search for new resources, a team of prospectors makes an unexpected archaeological discovery. The alien structures visible in the distance have slowly yielded to the ravages of time, but much of their antigravity mechanism appears to remain intact.

Like most of my images, this one evolved gradually from a vague initial idea. In this instance, the design of the vehicle was of primary concern. Servo-driven legs patterned on those of an arthropod enable it to negotiate all manner of terrain. On a level surface, the pincer-equipped "feet" are reoriented to serve as traditional wheels.

The large geometrical structures are intended to represent artifacts of alien design. Aside from some indications that they are very old, they have been rendered without specific details. I hope to create images that feel as though they are part of a storyline, but are ambiguous enough to allow the viewer's own imagination to fill in the blanks.

The elements of this image were created as separate elements in Lightwave 3D, and the final composition was assembled in Photoshop. A considerable amount of painting was done at this stage, particularly to the background of the scene.

## PRELUDE



BURG '02





STEVE BURG:

Many of the elements in this image also appear in “Prelude,” and the two images are loosely connected by a sense of some overall storyline.

A rescue team reaches the base camp of some prospectors, and finds no survivors. Once capable of supporting human life, the atmosphere has been altered and the rescuers must wear environment suits. What has happened here? As if in answer, an alien structure (or machine) appears out of the swirling dust storm—evidently no longer dormant.

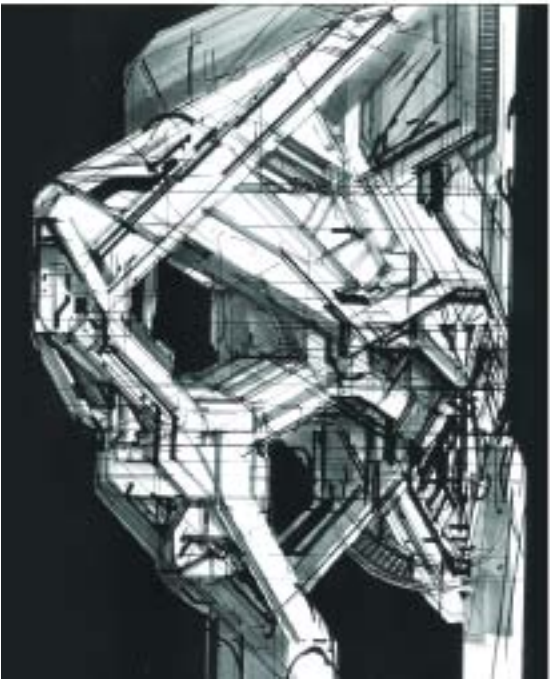
In addition to some basic prefab structures similar to those found in places like Antarctica, several vehicles can be seen scattered around the base. The crab-like crawler from “Prelude” is shown in its non-walking configuration; several VTOL aircraft and smaller ATVs are parked a bit further back in the scene. If you look very closely, a number of dead bodies are scattered about on the ground—although the horrific aspects of this scene are deliberately understated.

## AFTERMATH

The various elements of this image were modeled and rendered in Lightwave 3D. The final image was assembled in Photoshop, with foreground, middle and background elements on separate layers. The sun and sky were painted in, and numerous layers of interactive light and atmosphere were introduced to tie the various elements together and give depth to the scene. Last but not least, the 3D astronaut in the foreground did not hold up under such close scrutiny, and it was necessary to repaint him completely.







STEVE BURG:

This began as an acrylic painting that was then scanned and finished off in Photoshop.

I've always loved science fiction book-cover illustration, and this image was an attempt to do something along those lines. As such, there is a little more emphasis on the characters than would normally be the case in an illustration of a design concept—but that was the challenge I set for myself in this case.

For the background, I adapted an idea from an earlier painting—that of a “rocket sled time machine/drop-ship.” As opposed to sitting still, the time capsule is mounted on a vertical track aimed into the core of a time portal—whatever that might be! At the critical moment, the ship is fired down the track into the heart of the machine and—presto!—time travel!

The biggest challenge with this piece—by far—was painting (and then repainting) the face of the foreground character. I had a reference photo in the form of a clipping

from a magazine, but since the lighting in the reference bore absolutely no relation to the light in my painting it proved to be of negligible use.

The eyes proved to be particularly confounding. I got one of them right, then proceeded to paint the other one over and over again until finally they matched. Looking at the painting the next morning, I realized—to my horror—that although they now matched, the eyes were not on the same level! Faced with the prospect of having to repaint the eye again (and probably ruin it in the process) I opted to scan the painting and complete it in the digital realm.

## TIME PILOTS







STEVE BURG:

A reconnaissance craft launched from an interstellar colonization ship has suffered a mishap while attempting to land. Following a thousand-year voyage from Earth, the colonists have awoken from hibernation to discover the hoped-for New World is now locked in the grip of a terrible ice age. Returning to Earth is not an option; they'll just have to make the best of it here.

In this piece I've revisited an image originally done in acrylics a number of years ago. In contrast to a lot of my work, I've always had a clear picture of this scene in my mind, and I was never satisfied with the original painting. It never quite captured the stark mood I was after.

In reworking the image, I began by replacing the figures. Some figures created in Poser served as reference, and were then repainted in Photoshop. I then modified the design of the ship somewhat to make it a little more unusual. The ship was created in 3D and composited into the painting.

## ICE

I decided to alter the format from a horizontal to a vertical frame to accentuate the sense that the ship has crashed on a high precipice. The color palette was shifted toward the red, with a higher level of contrast overall.

What began as an attempt simply to "tweak" a scan of the original painting ultimately turned into a complete overhaul of the piece, and there is almost no trace of the original image remaining.

So after all that, does the new painting match the image in my mind's eye? Not quite, although it's definitely much closer. Maybe I'll have another go at it in the future—but not anytime soon!



BURG '02





STEVE BURG:

## DAWN ON RAIIS-TANNIBRAE

These views of a large complex floating above the surface of an alien world were rendered in Lightwave 3D, with a little last-minute tweaking done in Photoshop.

I wanted to capture the feeling of a busy port at dawn, with numerous craft of different shapes and sizes coming and going. The enormous cubes—at least in my mind—contain portals that enable inter-dimensional travel to other worlds. Large ships circle the area, waiting for clearance from traffic control to proceed to their destinations—much like jumbo jets at a modern airport.

The great thing about 3D is that once a scene has been created, you can wander all over the place looking for nice angles, and lighting can be adjusted almost instantaneous-

ly. And of course, it all moves! Most of the 3D-based images in this book also exist as fully animated shots.

That having been said, it was somewhat challenging to compose a single image that balanced the various elements into an effective still image. After trying out a number of different color palettes for the overall environment, I settled on a nearly Earth-like “blue-sky-at-dawn” look. The lighting was adjusted accordingly, and a number of different views were rendered before arriving at the final composition. As a last minute afterthought, some of the clouds visible in the foreground were created as a separate element, and blended into the scene in Photoshop.









BURG '02





## NOMADS

STEVE BURG:

Another time, on a world far from our own. Immense landing craft have been shorn up on their undercarriages, and repurposed to serve as rolling cities. A dozen generations after some great cataclysm rendered this New World inhospitable, the inhabitants have been severed from their past. All knowledge that their ancestors once traveled here from Earth has now been lost, and they face an uncertain future.

This image has its roots in a story I jotted down a number of years ago. It is a “slice of life”—a relatively quiet moment from the overall scenario. Occasionally the city/ships must cross the open sea, and here we see one pulling itself back onto dry land in early morning light. Dozens of scouts walk the ground ahead of the city/ship, on the lookout for unstable ground that would pose a danger to their home.

The elements of this scene were modeled and rendered in Lightwave 3D. When depicting a large exterior environment such as this, everything is dependent upon the specif-

ic viewpoint of the illustration (or shot, if I was to do this as an animation). It's very much the same as setting up a miniature shoot in the “old days” before the advent of CGI. There is a great deal of forced perspective in the background, and the landscape is nothing more than a series of facades positioned to work for this particular angle. The sky is analogous to a painted backing. In fact that's exactly what it is—a painted image mapped onto a large rectangular polygon positioned several miles away from the virtual camera.

The rendered image was taken into Photoshop, and nearly everything wound up being heavily reworked. In particular, the foreground terrain simply did not hold up, and was completely repainted. Believe it or not, painting rocks and dirt can be a lot of fun!





STEVE BURG:

Shipwrecks and crashed aircraft have always intrigued me, especially when they've been abandoned for a long time and are in the process of being reclaimed by nature.

The idea here was to do a futuristic variation of a photograph I've seen at one time or another of a World War II bomber crashed in the African desert. Instead of a familiar airplane configuration, the derelict ship was given a very odd and ungainly design. To me, there is a terrific aesthetic to be found in real objects that have been designed solely on the basis of functionality. I find a lot of military and industrial equipment to be visually fascinating; with bolts, latches, hydraulic lines and other utilitarian features plainly visible. Aircraft, in particular, are beautiful creations and I never tire of looking at them.

This scene is probably not anywhere on Earth. Perhaps there is something of value hidden in the derelict, although I have no definite scenario in mind aside from the fact that the two characters have just discovered the ship.

# THE DERELICT

James Clyne asked me what the story behind this piece was, and I jokingly replied that the man hiding under the wing of the wreck owed the other man money. It's probably as valid a premise as any, come to think of it. There is definitely the hint of some tension between the two of them....

This image was painted in acrylics, and then retouched in Photoshop to remove some unsightly glare in the original scan.

Also presented here are several preliminary paintings—variations on the basic theme of exploration and wrecked ships. They are rendered in acrylics on illustration board, in a much smaller scale than the final painting.







STEVE BURG:

Whenever the opportunity (*i.e.* spare time—a rare and wonderful thing!) presents itself, I like to sit down and paint small color sketches. These colorful bits of board accumulate in a box that sits in my studio, and they rarely see the light of day. I joined the *Concept Design* group several months after the project began, so some of these pieces are presented here in lieu of original works I might have produced during those early months.

A recurring theme in a lot of my personal work is that of a rugged vehicle traversing a desolate and often forbidding landscape. The goal or destination may be hinted at, but it is always unseen and perhaps unattainable. After all, the journey is the thing.

I have always found a singular beauty in the remote reaches of this world, and others—the desert, the Antarctic, the abyssal depths of the sea or the surface of some remote planet or moon. As our world grows ever smaller and more crowded, the desire to explore remains deeply ingrained in

us. I believe, or at least I hope, that one day we will answer this call once again and venture forth into the Great Unknown. As always, the first step in any voyage of discovery lies in the province of human imagination.

With the exception of “Glacier,” which was painted in Photoshop, the pieces here are acrylic painted on illustration board and measure 6"x9".

## THRESHOLD







STEVE BURG:

## SCIENCE FICTION IMAGES

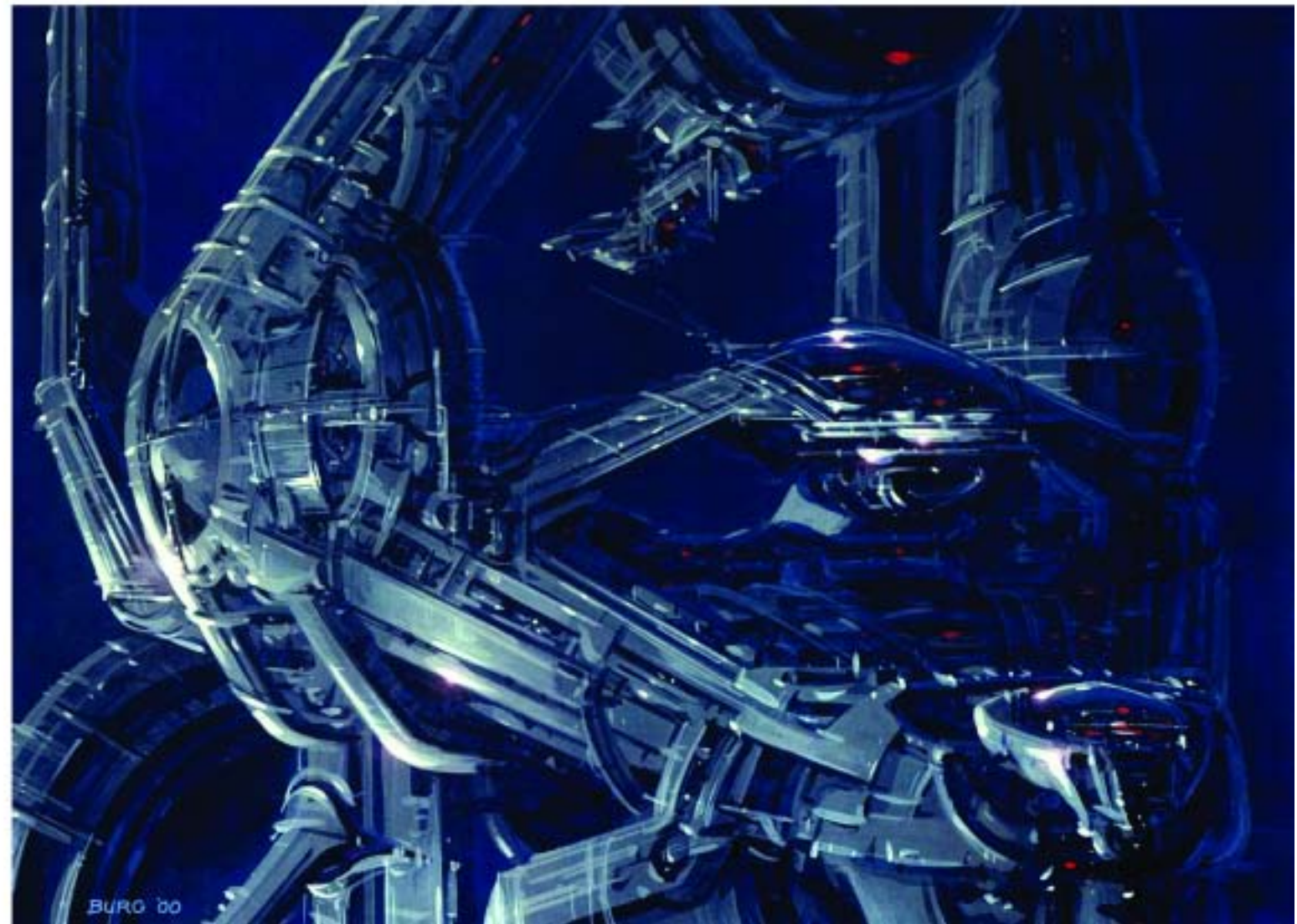
At first glance these images might not appear to bear any obvious relationship to one another. However, they are a part of an ongoing body of work that reflects a lifelong enthusiasm for the genre of science fiction. As someone who works in the motion picture industry, I differentiate between literary science fiction and the brand of science fiction that has been seen in films. Having been a reader of the genre since childhood, it's always been my feeling that it presents a very broad canvas that the entertainment media have yet to tap into fully.

Paintings such as these are created in a very free-form manner. If there is a drawing, it is usually a very simple sketch—just enough for me to nail down the basic concept. As often as not, I begin by painting a base color wash and following my intuition from there.

The paintings are relatively small, which enables me to work very quickly. Despite the seductive nature of the digital-art media, I still thoroughly enjoy creating images using

traditional art tools and materials. There is an intuitive level to working in this way that I find very conducive to nurturing the flow of ideas. The natural art media behave according to their intrinsic material properties, and things often develop in a highly spontaneous way that has thus far eluded the digital art tools—at least in my opinion.

Some of these images predate the *Concept Design* book project, but there is a direct link in the sense that they are the documentation of ideas—which for me is an ongoing project that constitutes the foundation of all my other work.







# NEVILLE PAGE

When one looks at Neville Page’s background and family, it really is no surprise that he would be involved in some form of creativity. His parents met in the theatre in Great Britain, his mother a dancer and father a musician. They eventually joined the circus, where his father played in the band and mother found herself atop an elephant waving at the crowd in a feathery outfit. You could say that when Neville was an infant he was not without colourful exposure.

When his family moved to the U.S.A. in 1970, the “showbiz” mentality followed them. His mother continued to perform and teach dance, whilst his father created the most outrageous Halloween costumes for his children that anyone in their Chicago neighborhood had ever seen. Picture a 9-foot papier-mache shark costume on a rickety 9-year-old’s shoulders.

As with many young boys in the late 70’s, “Star Wars” had such a profound impact that it inspired Neville to pursue the field of entertainment. He wanted to be in the sci-fi movies and at the time he did not even know that design existed. At 17, Neville packed up the car and drove cross-country to Hollywood to pursue the infamous dream. After completing two years of acting school, he was primed and ready for the big screen. Auditions trickled in and tables kept getting served. It was not until his girlfriend’s mother questioned his ability to provide, that he himself began to question his ability to provide. With that realization, Neville called his mother and announced, “that’s it, I’m out. What was that school on the hill above the Rose Bowl you have been talking about?” Literally, as he hung up the phone with his mother, excited at the prospect that he would pursue a new career entirely, it rang again. It was the big break. He was hired to appear on the soap opera “General Hospital.” Whether it was fate or typecasting, he was to play a waiter. Shortly thereafter, his character was dropped and the real career would begin.

During the time he was putting together his art portfolio, to make ends meet Neville performed at the Ice House in Pasadena and the Improv in Hollywood as a stand-up comedian. However, once at Art Center College of Design, he realized his true calling. Although he did not understand completely what it was that he was doing, it felt 100% right. So “right,” in fact, that he graduated with honors in 1990 and immediately started a design consultancy with his roommate, who would eventually become his best friend and studio partner, Scott Robertson.

Together he and Scott developed a wide range of products from durable medical goods to action figures. Eventually, they found themselves teaching at the Art Center campus in Switzerland until its unfortunate demise in 1996. Upon returning to Los Angeles, Neville resumed teaching at Art Center and took on the position as Assistant Chair of Product Design. Additionally, he teaches at the Otis College of Art and Design and also at Gnomon.

Since Neville returned from Switzerland his client list includes: Jakks Pacific Toys , BMW subsidiary Designworks/USA, Mattel Toys, Nike, Rock Shox, Universal Studios’ “Men in Black”-The Ride, 20th Century-Fox, Fiat; and the feature films “Minority Report,” “Planet of the Apes” and “X-Men 2.”

In addition to his teaching career, Neville is currently involved as a design consultant for the entertainment, toy, and automotive industries; and is developing his own line of educational art products.



NEVILLE PAGE:

I had taken some photo reference of a sweet old man, Charles, who works near my studio in the hopes that I would someday do a sculpture of him (I still have this hope) but I ended up using the photos as a starting point for this alien piece. The goal was to achieve a snapshot of an alien that was intriguing in character and simply realistic.

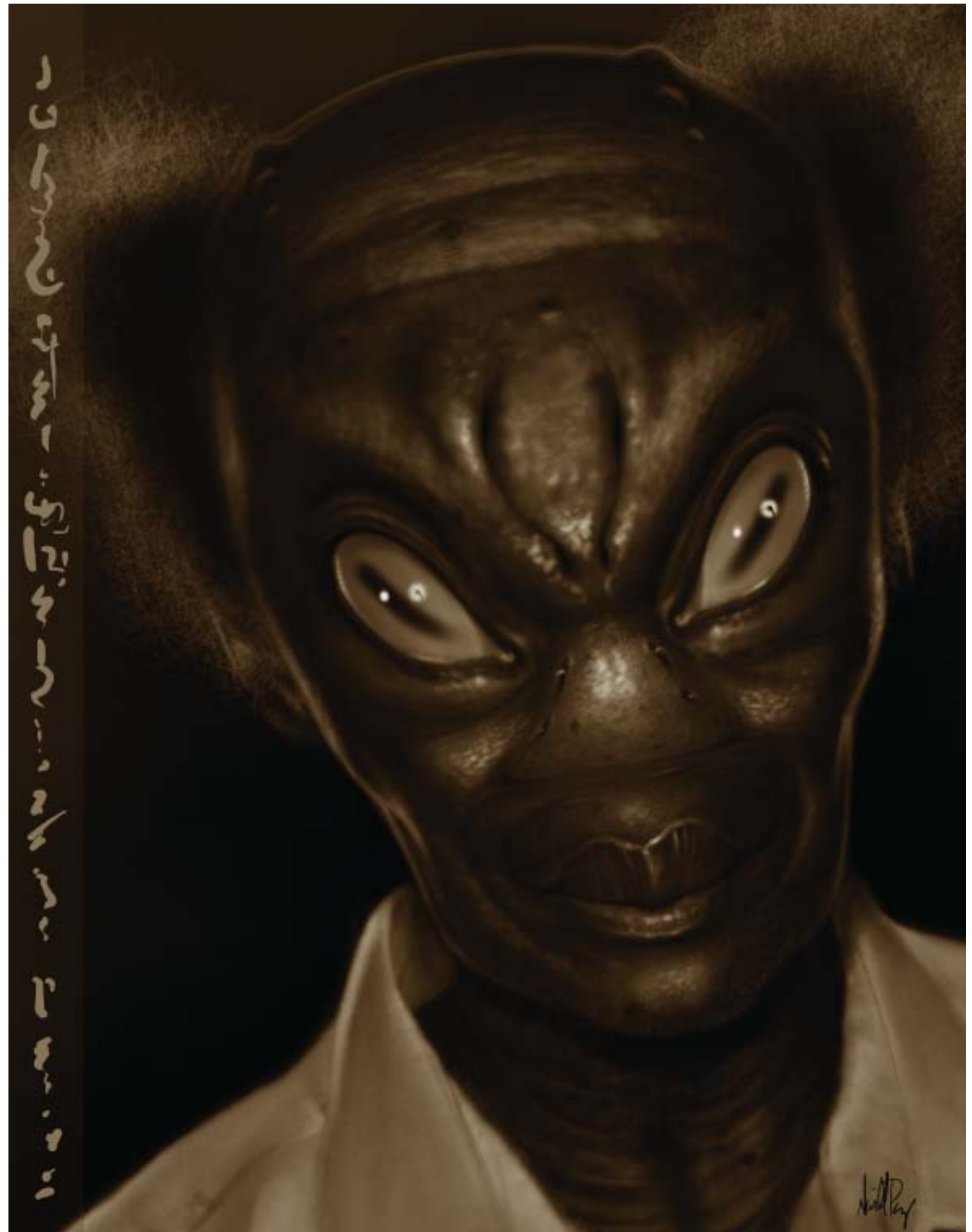
My approach to the rendering was much like that of doing a realistic sculpture. The basic design and consequent forms are obviously made up and paramount to anything else, but it was the skin textures in the photograph that I wanted to replicate. In utilizing reference material it is important to remember not just to copy it, but rather to study it and really understand it. Once the basic form was

put down I was ready to add skin textures. This was done in the same way I would add texture to a sculpture, by creating “sculpting tools” to achieve specific skin textures. I built them as brushes in Photoshop and, to my surprise, I had instant realistic skin textures with every pass of the brush.

The hair was achieved in a similar way. A simple brush was created by drawing a small patch of hair and adjusting it under the brush presets. This allowed for instant hair with just a couple of passes of the brush.

In the end this piece looks nothing like Charles, but quite frankly he probably appreciates that.

## CHARLES







NEVILLE PAGE:

Simply, she's just another pinup. Time was not on my side with this one, so it was paramount that she happen quickly. I knew that basically I wanted a female in partial firefighter gear, with tech boots (also known as "Fire Pumps"). First step, log onto "Google" and gather reference material. Next step, make a quick line drawing and flounder for a while with a cool boot design. Cool never happened so I ended up with these masses of footwear. Don't ask! They just needed to look interesting at that point.

I then scanned in the line drawing and began to render away feverishly. I started with the boots and worked my way up. By the time I got to her face I was feeling a bit tattered.

Consequently, her face was reflecting that. It was discouraging to zoom out and see that my pinup was not looking her finest. Fortunately, front views are pretty easy to do, so she got a complete makeover.

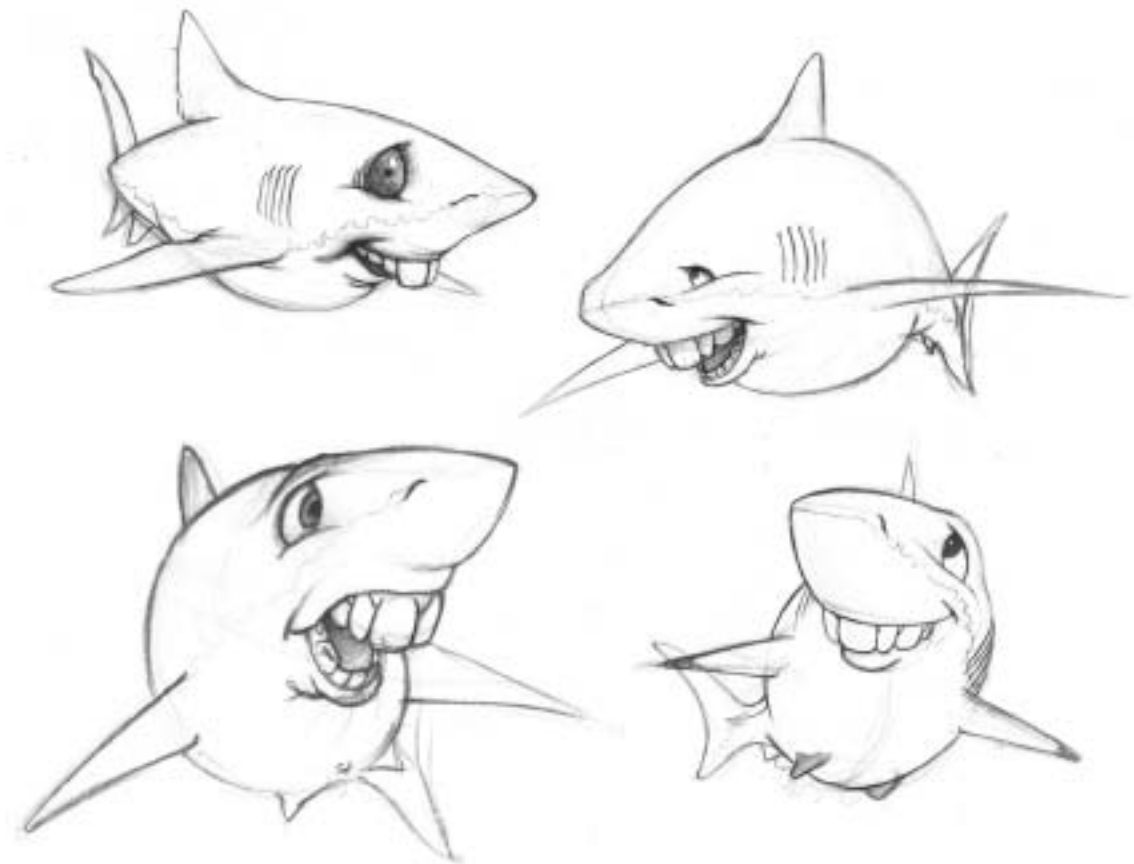
Then there was this left arm hovering over a void with zero time and energy left. I wanted to ditch the dog, but she needed a sidekick. You can tell that I used the same technology in the dog design as in the boots: none.

The whole piece took about a day and a half including, dare I say it, the design.

## FIRE PUMPS







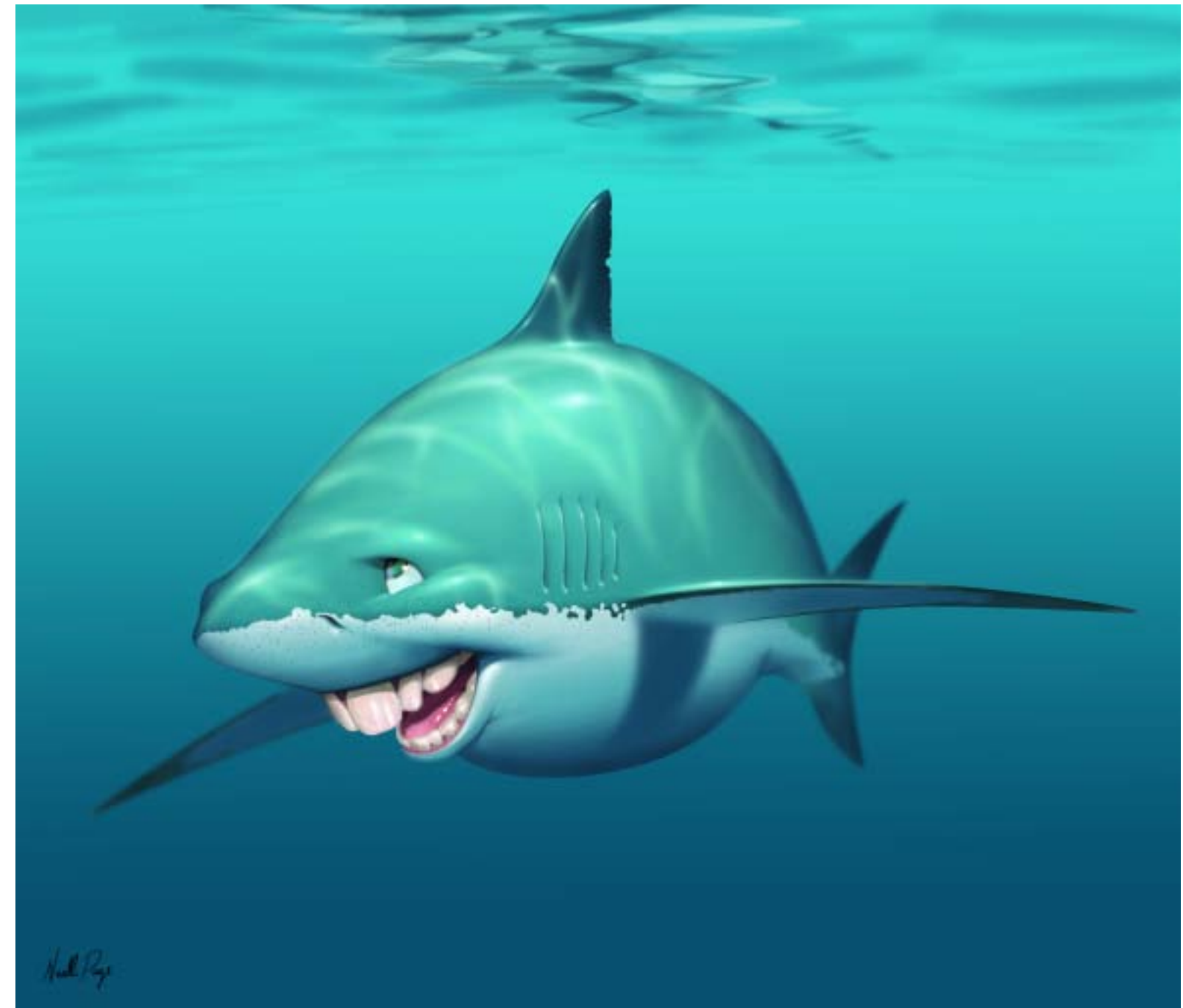
NEVILLE PAGE:

I had originally thought of designing a super shark, a very realistic and very frightening ominous beast. Then I thought that they already have a pretty bad rep, so I opted for the converse.

Our natural tendency when we look at animals is to see them with human qualities anyhow. For example, a dog in the hot sun panting might be interpreted as “oh how cute, he’s smiling,” when in fact the dog is thinking, “damn, it’s hot, I’m miserable.” So, my intent on this piece was to literalise human qualities in the character. If you get a chuckle from this, and I would settle for a smirk, then it is a successful piece.

The rendering was extremely simple, almost too simple. And it looked that way too until I added the reflection on the water’s surface and the rays of light on his back. This really added so much to an otherwise dull illustration. However, the aim was to develop a character that would provoke a smile at first glance.

## GREAT WHITE SMILE





NEVILLE PAGE:

Sometimes scale does it all. There really is not too much to this piece other than a subjectively attractive naturally formed ice sculpture. But when you notice the airplane flying by, the whole piece takes on a very different feeling. What may become more fascinating to the viewers is what they don't see. For a form like this to appear as it does, the mass below the waterline would have to be tremendous. Additionally, one may wonder what anomalistic environmental conditions occurred to create such a shape. These are the unconscious things that I hope make a piece like this more interesting.

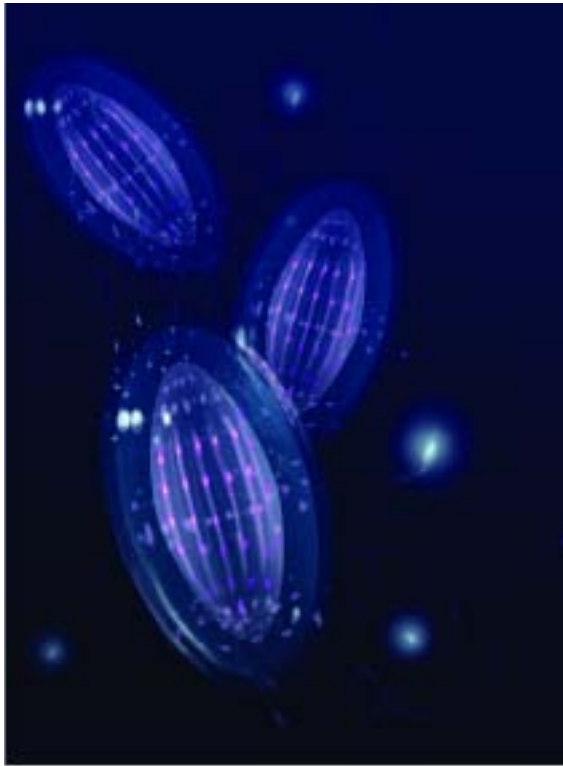
## "AND TO YOUR RIGHT..."

Once finished, and it was a very fast piece, I craved to explore this topic much more. My draw to the subject matter is difficult to define, but partially it is the purity, and resulting beauty, of water in a frozen yet fluid state.

I tend to work in many layers (speaking in Photoshop terms), but this rendering was done using only two: background and iceberg. As a result it went very fast, about 1.5 hours. There is something to be learned from this and hopefully I have.







NEVILLE PAGE:

## AMBULANT CEPHALOPOD

You can try to be inventive when it comes to creating a new creature of the deep, but chances are, this thing probably does exist. I did want it to appear plausible and in some ways familiar, but when I started to research marine life, I was amazed at how obscure and nonsensical some creatures are. It almost seems like anything goes. That did take some of the pressure off, because if I did something daft, well, it may turn out to be interesting. I did a series of thumbnails until something just felt right, and then I immediately began to render.

To achieve the effect of the transparent skin was rather easy actually. I had done the colour thumbnail above to see

if the technique would prove effective, and once I saw that it did, I jumped into the final rendering. It was as simple as creating the perimeter (in this case, with a path), loading the selection, hiding it (so that it is easier to see what you are doing) and lightly airbrushing, with a light blue, the skin's edges. This was all done on a separate layer with the dark water environment as a background. It really was not all that different from what I had learned in Ted Youngkin's class in my fourth term at Art Center, except we used white Prisma on Canson back then.

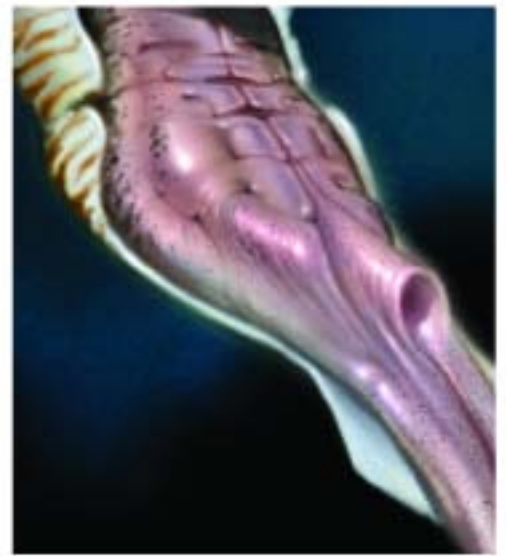












## EVOLUTION OF THE NAUTILUS

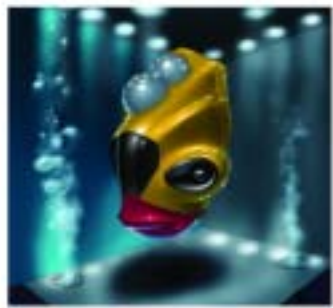
Has this creature evolved from the Nautilus or was it the predecessor? Regardless, like the squid, this pseudo-Nautilus was to be plausible and familiar. Developing creatures like this feels more like free-form sculpture than anything else. I suppose this is because the parameters for sea life seem so wide open that if you just let it flow, you can't go too wrong. Although, in actuality, there are some animals out there that look like they should not have evolved beyond the prototype phase. It is comforting to know that even nature can have a bad design day.

This piece began as a very rough marker sketch. Once scanned in, the painting began. Mostly the airbrush was used to block it in. But the real fun was in all the detailing and freckling. A lot of the painting that I do on character illustrations I learned from a creature painter in the film industry named Tim Gore. The techniques he uses in painting 3-D silicone and latex skins are beautiful, but very labor intensive. However, the same results can be easily achieved

NEVILLE PAGE:

in Photoshop because of the custom brushes you can build that will emulate these 3-D techniques. Once you have done it digitally, though, it is a bit frustrating to go back to "old school" techniques. But, in fairness to the 3-D realm, there really is nothing more powerful than seeing the design in the round in "real life." It just takes about 5 times as long to get there.





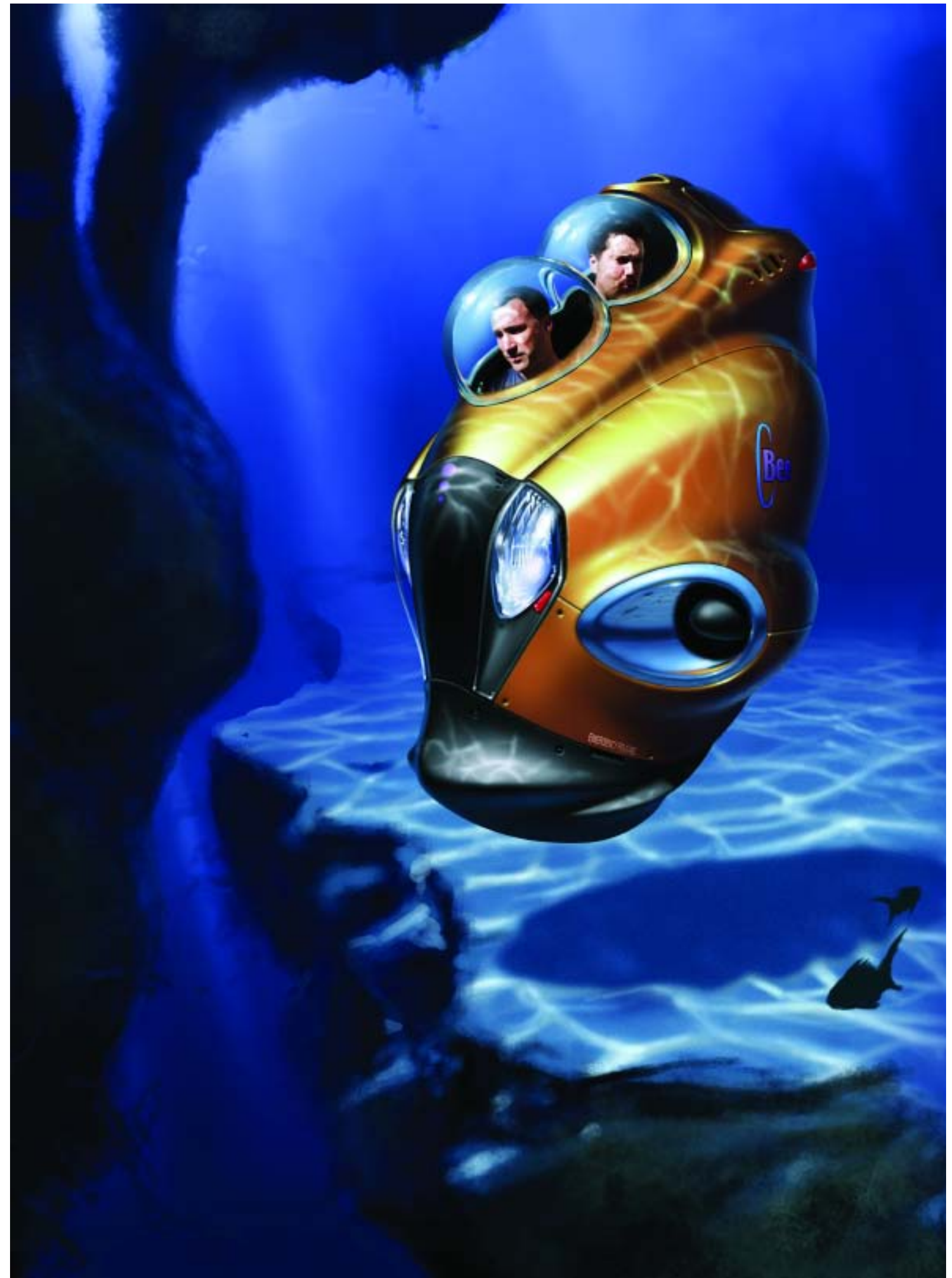
NEVILLE PAGE:

When I was about 9 years old I saw an ad in the back of a comic book stating that you could buy a submarine for 12 bucks. I sent off my allowance of 3 months and am still waiting until this day to receive the package. In the meantime, I have been in pursuit of a legitimate 2-passenger dry sub. Quite a bit of time and money have been spent in its development; however, client work has superseded my indulgences here and she remains partially completed. Of course the goal is to realize the sub as a fully functional and aesthetically complete prototype. Until I have a few extra dollars burning a hole in my pocket, (or a very generous investor), this project will forge forward at the pace of a feverish sea slug.

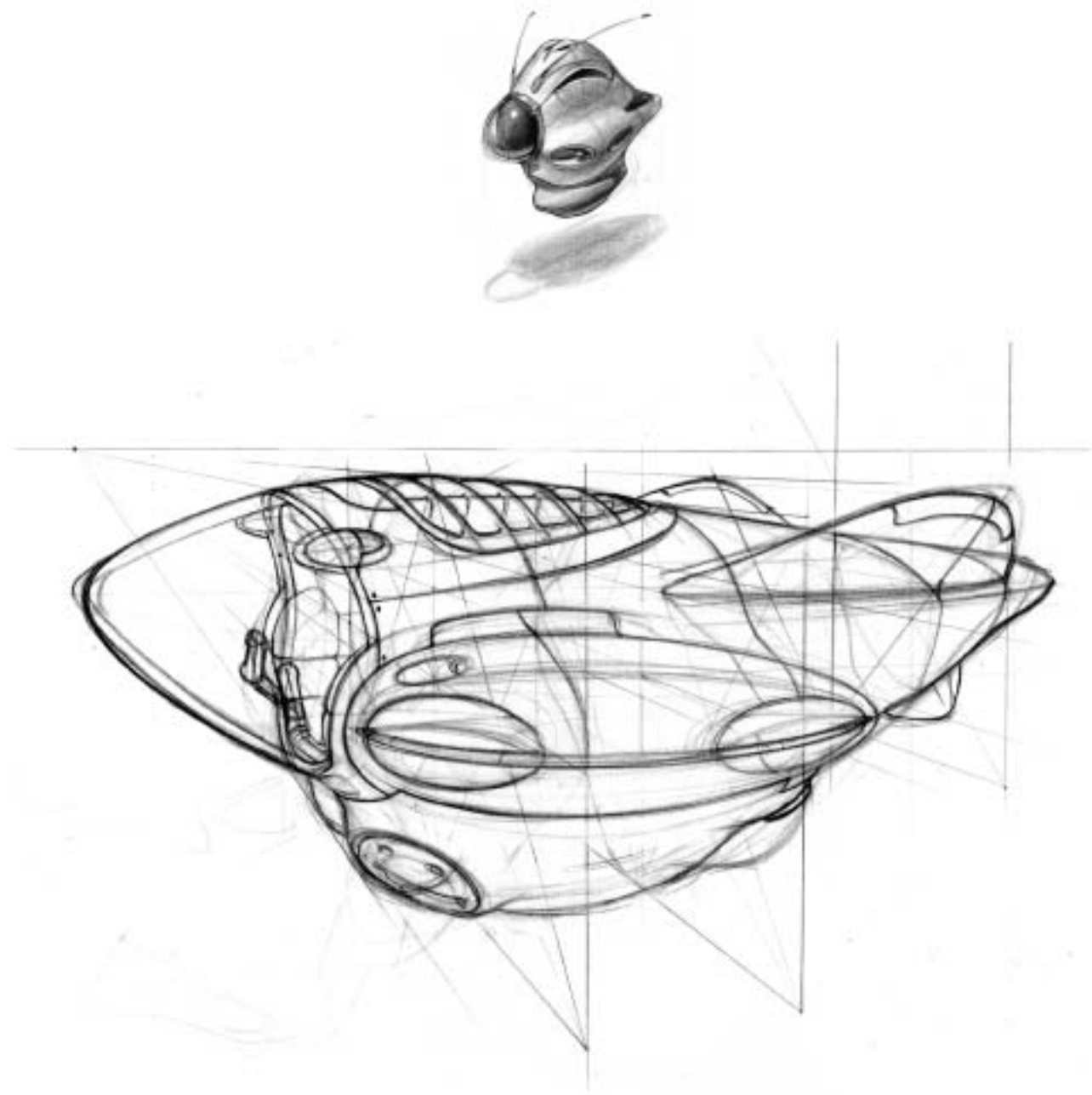
The aesthetic was heavily influenced by the package as well as composite technology.

To execute this illustration I employed the very basics of Photoshop. Many paths and lots of “preserve transparency” made rendering various body panels rather easy. The biggest compromise (rather, lie) is in the canopy. There is a refractive thing that happens when underwater that makes the occupants appear to shrink in scale significantly. This really throws off the perceived scale so I opted to keep the occupants at a 1:1 scale with the craft.

## SEA BEE







NEVILLE PAGE:

This is a second generation of the submarine project. It is a one-passenger vehicle where the pilot operates it in a recumbent position. This orientation is similar to a scuba diving position and therefore gets you closer to the action. I had my doubts that this would be a comfortable position to hold for long periods of time, but in mock-ups, it was surprisingly comfortable. This is about as small as one can get with a submarine before it becomes too confining. A lot of people react adversely to the thought of being in such a small environment, but once you are underwater, the sense of claustrophobia may shift to agoraphobia. Having ridden in a traditional acrylic sphere research submarine, I observed

that the acrylic “disappears” once underwater. This is due to the water and acrylic having similar densities.

Like the “Sea Bee,” this rendering was done with many paths and simple blocking in of the forms. I chose to do the environment as a studio setting. Basically, the light source comes from a single soft box above and a couple of spots on the left. To achieve photo-realism (assuming I have) it is best to think like a photographer when first staging the piece and then just walk through the physics of lighting and material indication. This actually is a fairly easy rendering technique.

## TORPEDO





NEVILLE PAGE:

This guy was just plain fun to do. I wanted to realize an alien who had some of the traditional elements but with some human characteristics as well. It seemed kind of funny to me that this alien, who had the typically massive cranium to accommodate his massive intellect, was in fact not so sharp after all. Talk about “bird brain.”

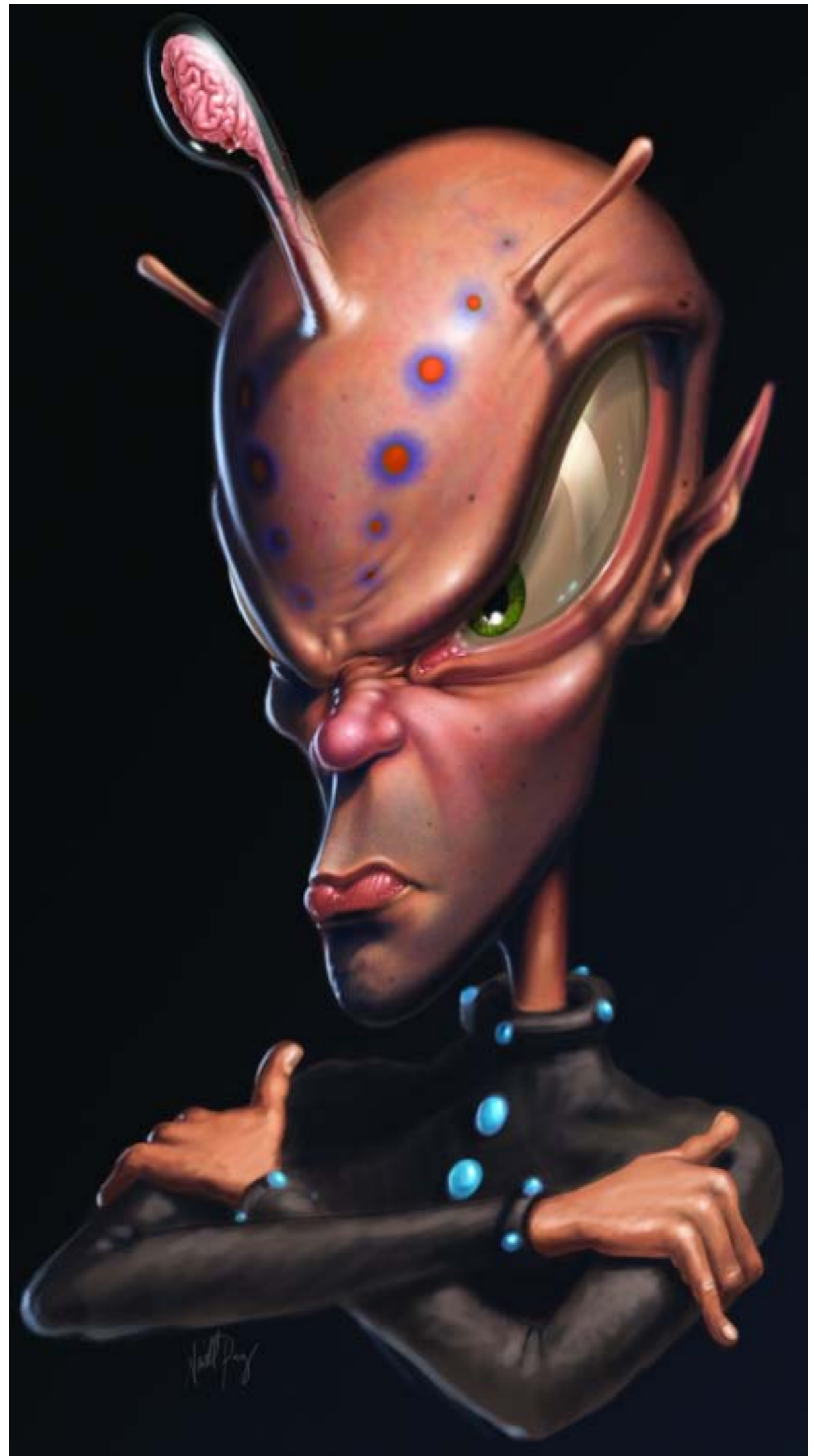
Sadly, I used myself as the model for this sketch. Sitting in front of a mirror, I pouted the lip and captured all of my beauty in one quick thumbnail. Even sadder, however, was that my nieces instantly recognized that it looked like me. Oh well, you make sacrifices for your work, right?

From the beginning, I was unsure how I wanted to stage and colour this piece. So I perused some covers of *Time* magazine for portrait reference...and I came across a great image of Yasser Arafat. I used that image as a foundation for colour initially but found that I needed to infuse a bit more of a healthy glow in the Alien at the end.

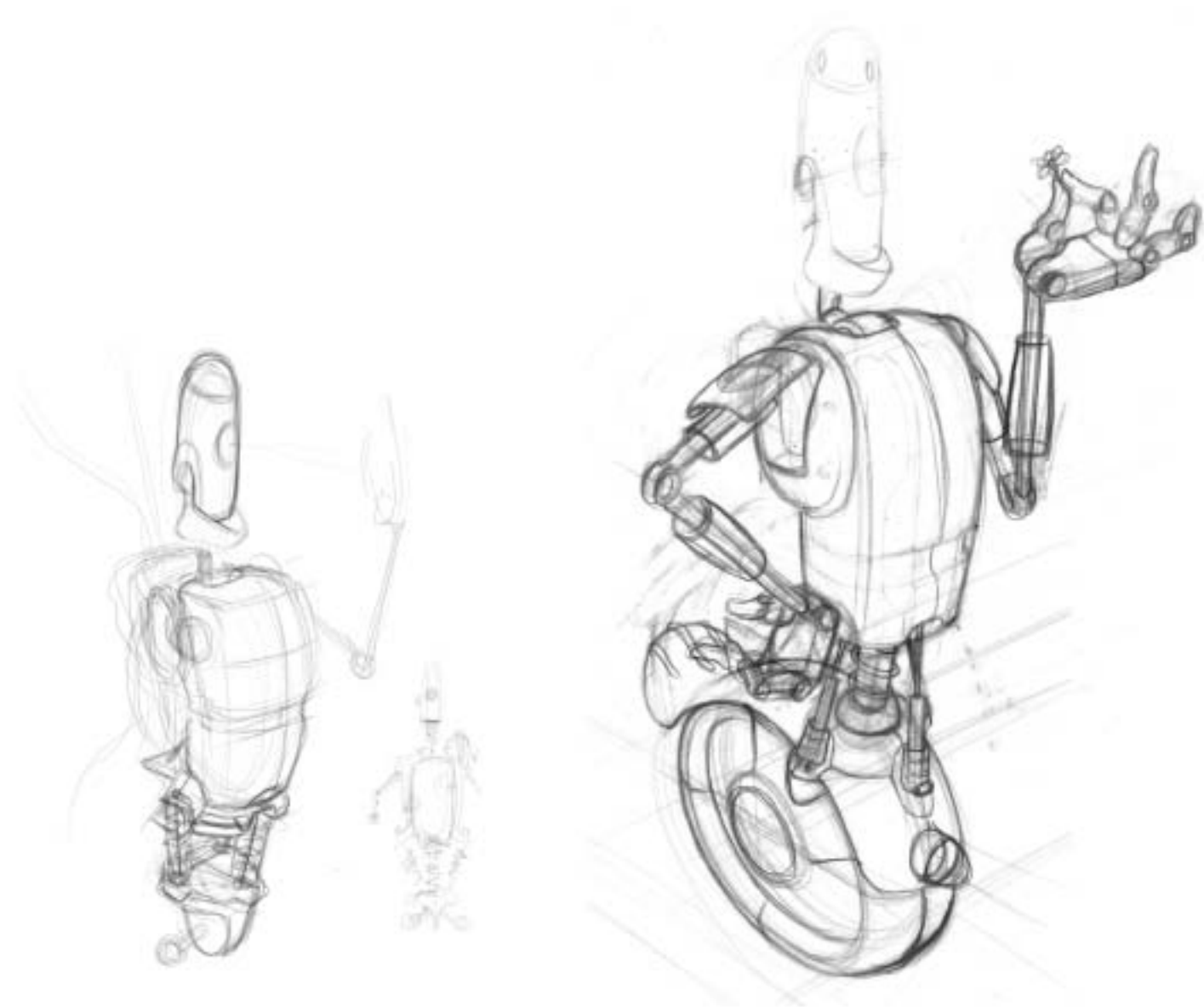
To achieve the skin texture, I employed a technique

from the effects industry, used to paint a realistic surface on silicone and latex skins. It is a layering technique that you do with an airbrush. I figured that if it works so well on 3-D models, surely the same would hold true on a 2-D one. The biggest advantage to doing it digitally, aside from not having to change your colours and clean up, is that it takes about one-fifth of the time.

## THINKIN’ HARD







NEVILLE PAGE:

We have all had days like this. In fact, it is directly reminiscent of many car experiences I have had.

Sometimes, to convey a character with more efficacy, it is important to add context rather than just do a beauty shot. You not only define the character more, but you can also establish somewhat of a narrative.

This piece was done in Photoshop using a textural brush, few layers and a lot of artistic license. I had sampled some colours from a photograph I took of a gas tank and ran with it. In fact, the character's torso is clearly inspired by the same photo.

WHAT THE...







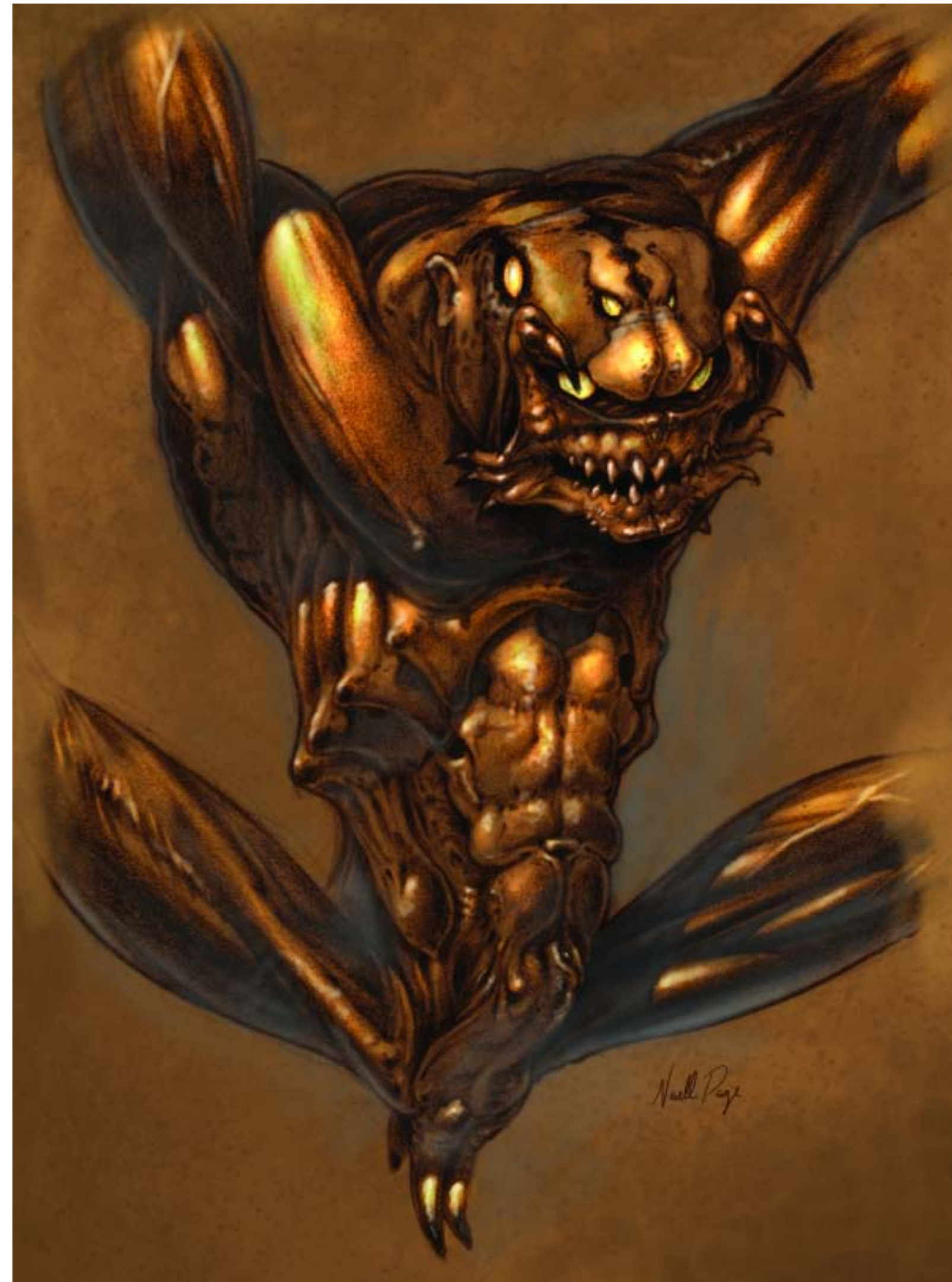
NEVILLE PAGE:

## ARACHNOMORPHIA

What if we took the metamorphosis of Spiderman a bit further? I had experimented with having spider legs protruding through his flesh at first, but it appeared more like the character was being taken over by an arachnid rather than morphing into one. With that, I opted for the bifurcation of the forearms and lower legs. This accomplished the goal of having an eight-“legged” creature while still retaining a human look.

The drawing was initially done on Bienfeng marker layout paper (14"x17") with a black Prismacolor. I then scanned the image into Photoshop and put it on a multiply layer. The next step was to create a weathered, parchment-like paper background. Once completed, the creature was further modeled through a series of color dodge and color burn passes done on the background with the creature multiply layer on top. I must admit, it felt good to work in traditional media at the beginning of this piece. One must not forget, however, that when they say “traditional,” it may

mean something entirely different to someone else. For example, traditional media might be graphite and parchment, or perhaps a burnt stick on rock (depending on how far you go back). I have seen many a student repel digital because it is “devoid of character and lacks the feel of traditional media” as markers do for example. It amuses me to hear that xylene-based mass produced sponges in injection molded containers would be considered “traditional.” The best of both worlds would be to understand all traditional media and embrace evolution as well. Remember, the computer is just another tool.







# MARK GOERNER

Born in the Chicago area in 1970, Mark Goerner was drawn at an early age to exploring art, and more specifically, to conceptual design and problem solving. Sketchbooks and early projects reflected an interest in industrial design and fantasy environments with a futuristic mindset. Raised by a family involved in manufacturing, industrial inspiration helped fuel an interest in machinery, and a lifelong interest in the process of fabrication and a curiosity of materials. This, coupled with a love of nature on both a macro and micro scale, archeology, architecture and automobiles, all came together to help form his base of interest. These interests were fed in later years by attending classes at the Art Institute of Chicago, Rhode Island School of Design, and finally at Art Center College of Design where he received a Bachelor of Science, with distinction, in Transportation Design, with a focus on entertainment design. While in school, internships included work for Coca-Cola, providing advanced concepts in distribution, vending and packaging, and BMW subsidiary Designworks/USA, working on various automotive and product-design projects.

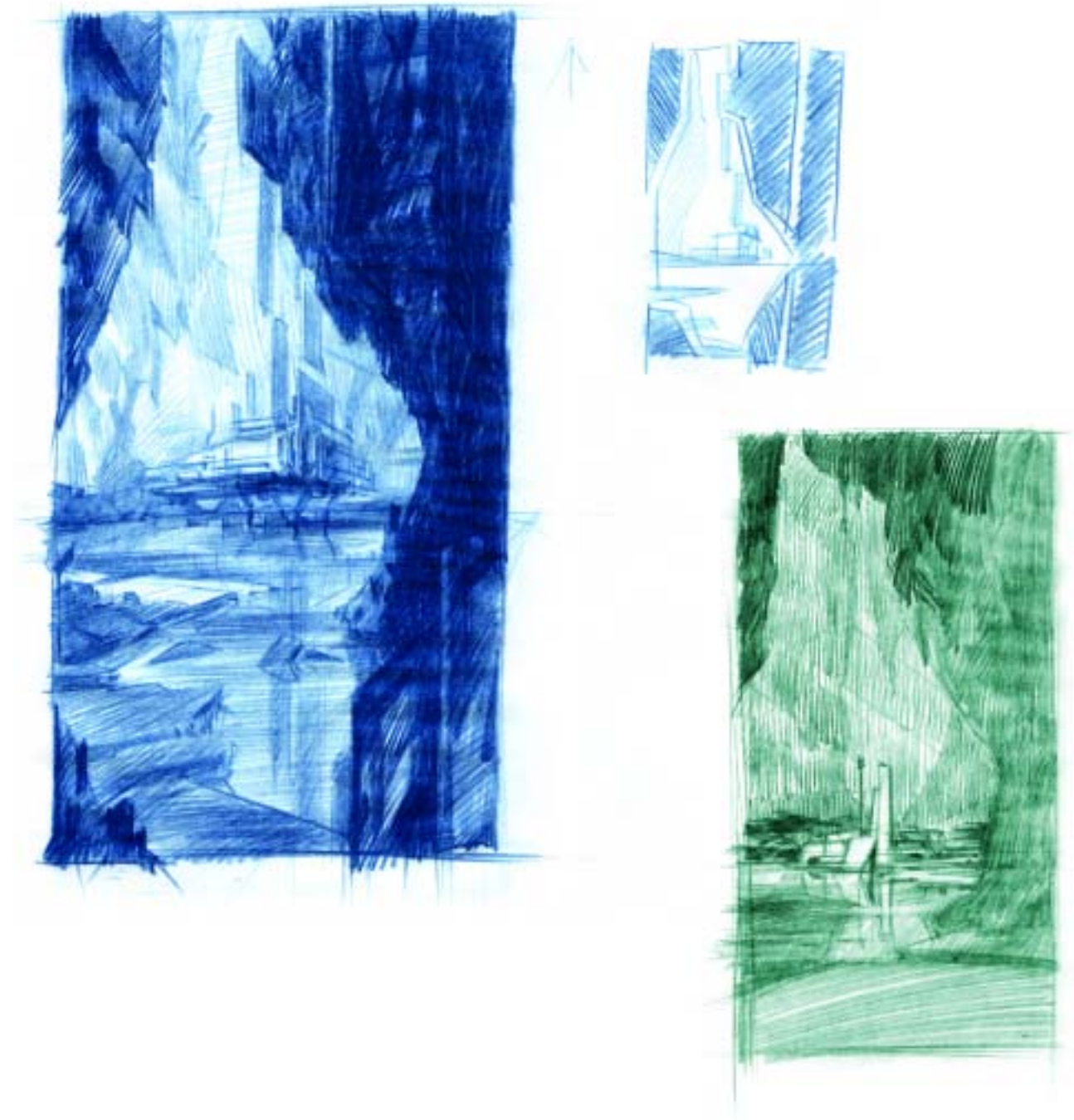
Mark's freelance career began by providing design services, illustrations, storyboards, character and concept development to Rhythm and Hues Studios for McDonalds, Honda, Disney, ESPN, Kraft foods, Intel, Advil, and such films as "Star Trek 5" and "It's Tough to be a Bug" for Disney theme parks. Further work was done for Designworks/USA on advanced concepts and scenario development for

automotive environments and interfaces. Other subsequent client work included concepts for video games, prop illustrations for "Blast from the Past," scenario development and designs for theme park rides and Imax-formatted attractions for Toyota Motor Corporation and Caesars Palace, Las Vegas, posters, illustrations and graphics for assorted local and international clients, as well as museum environments for Ford Motor Company, set illustration for "X-Files," and concept computers for Intel.

As these clients and affiliations expanded, an alliance with the feature film industry as conceptual illustrator presented itself. He began by working on "Minority Report" designing and illustrating props, sets and environments, followed by "Constantine" and "X-Men 2." Along with this work, he has taught classes in Visual Communication at Art Center, and built up an extensive knowledge of construction and interior design through personal projects in remodeling and restoration of houses.

Mark currently resides in Pasadena, continuing to work on varied projects as a digital artist and in constant pursuit to expand skills and a strong level of artistry in photography, illustration and design methodologies. As one of the top designers in the L.A. area, Mark continues to strive for opportunities to express original and comprehensive visions of spaces not yet known.





MARK GOERNER:

## TORBERNITE CATHEDRAL

While sketching and thinking of the possibilities of an unusual space, I began carving out a cavern that would open up to a vast cathedral pocket. In the center of the composition would be a structure that, although manufactured in origin, would appear as if it were an extension of its own environment.

As I was laying out the composition, I wanted to suggest that the space would be an intersecting labyrinth of passageways. Influenced by trips across New Mexico and California where basalt rock formations would occasionally show up, I drew on the look of these rare forms and attached their aesthetic to the thumbnail sketches. The amazing lat-

tice of these tightly clustered and eroded geometric forms inherently looked as if it were designed rather than formed organically, and would provide for an interesting atmosphere, especially when exaggerated.

As for the building, in broad strokes it represents ideas I've kicked around in the past relating to architecture's potential use of variably tinted, electronic and structural glass. Being faceted and crystalline in form, I thought the use of compound planes of glass would make for an appropriate complement to the cave walls.



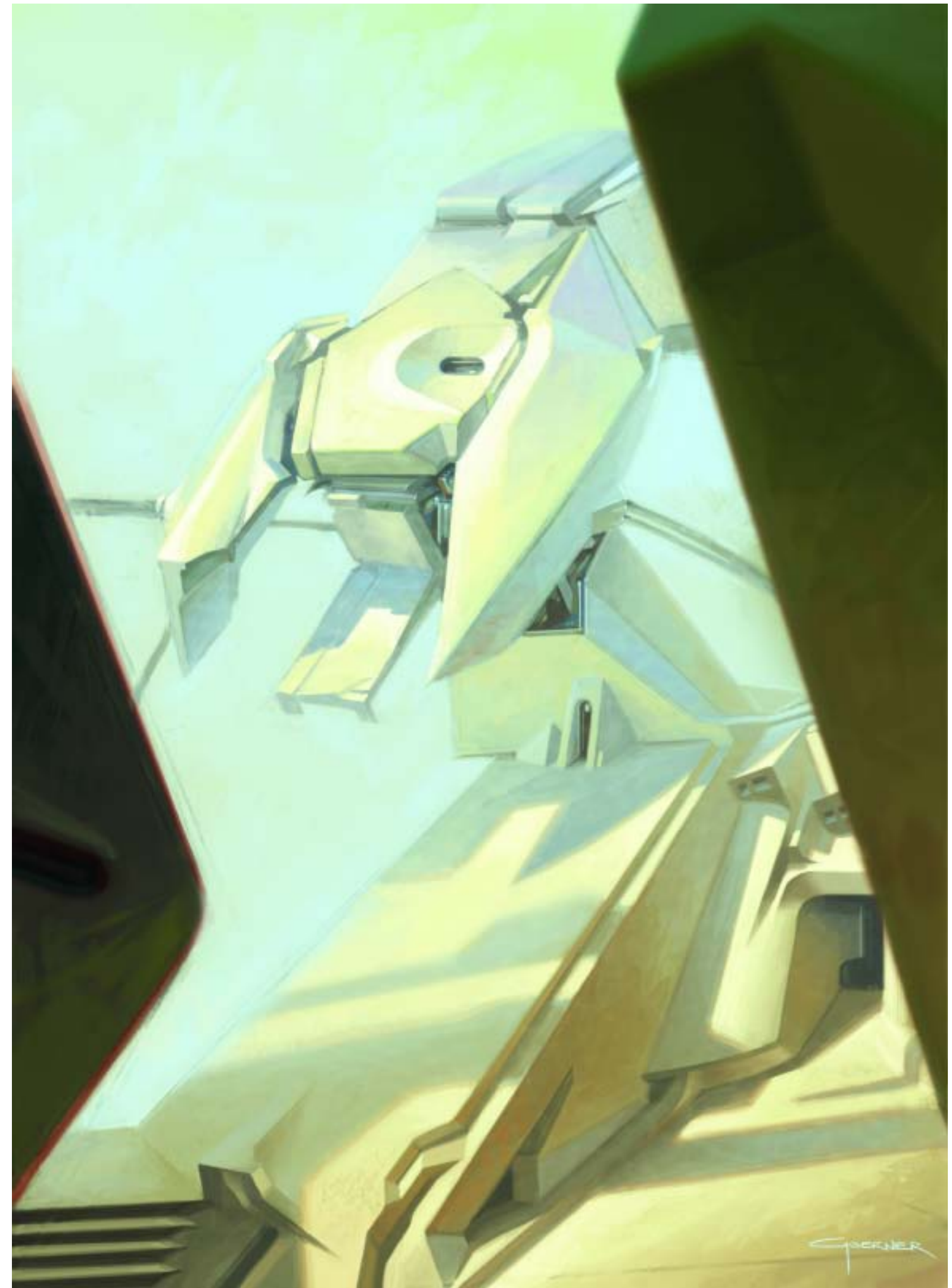




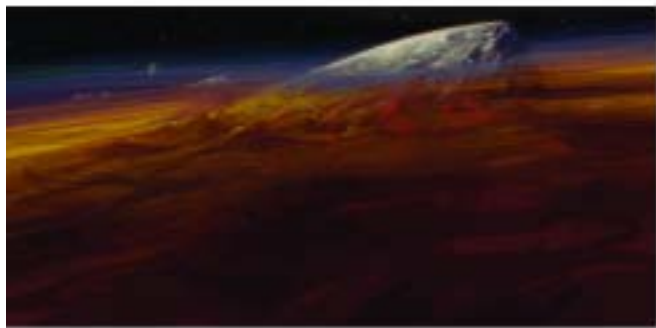
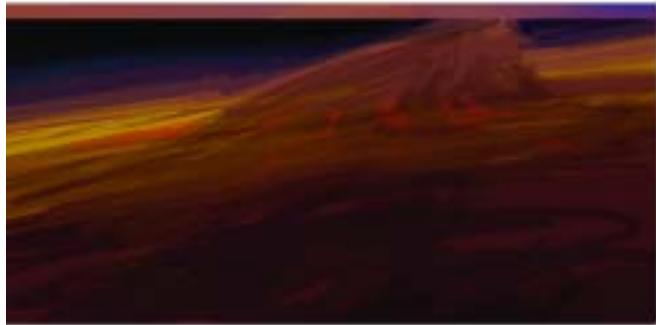
MARK GOERNER:

This was probably one of the most gratifying pieces I did for the book. It was driven by a series of small line drawings done in my sketchbook based on kinetic architecture. For many years, I've had short daydreams relating to the merger of automated buildings and public spaces; smearing the lines between kinetic sculpture, functional architecture, and vehicles. Similar to the presence of a tree, a cave, and a river in a landscape, the modern habitat has the potential to merge its key elements in a similar way.

## JUGGERNAUT







MARK GOERNER:

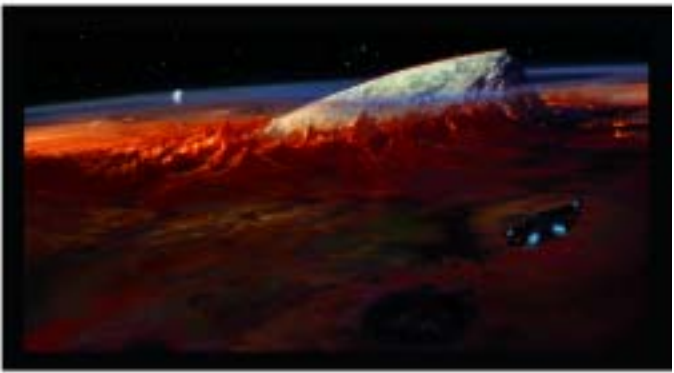
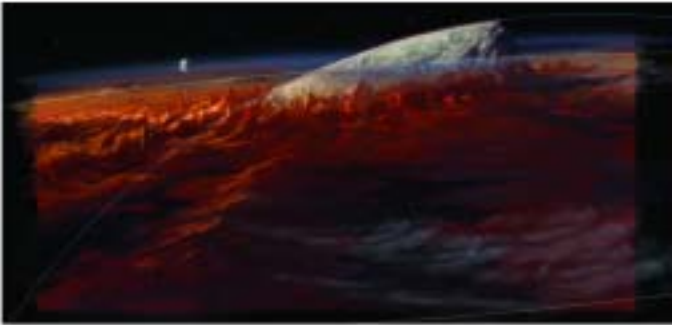
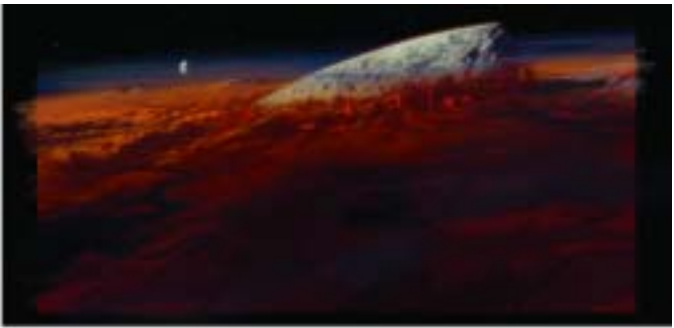
This is the first in a series of four illustrations describing the evolution of a civilization in million-year increments. I wanted to show the influence of a catastrophic event on a planet, which on its surface was dormant but in its make-up of materials and relative position to its sun, had the potential to bud into an active host for life.

The scenario starts with the effect of a meteorite's collision with one of the planet's moons as the catalyst for a series of events that would get the process of organic reanimation started. Imagine the fragments of a moon falling out of orbit, dashing across the planet's surface, and burrowing into the tectonic plates causing massive volcanoes and the release of giant gas clouds and dust. The distortion of land-masses into mountain ranges composed of 10-mile chunks, stacked in piles reaching altitudes dwarfed only by the foreign lunar masses, would be peppered along the destructive path of fallout. Much like the exposure of air to food, or swab to petrie dish; remnants of the moons and meteorites

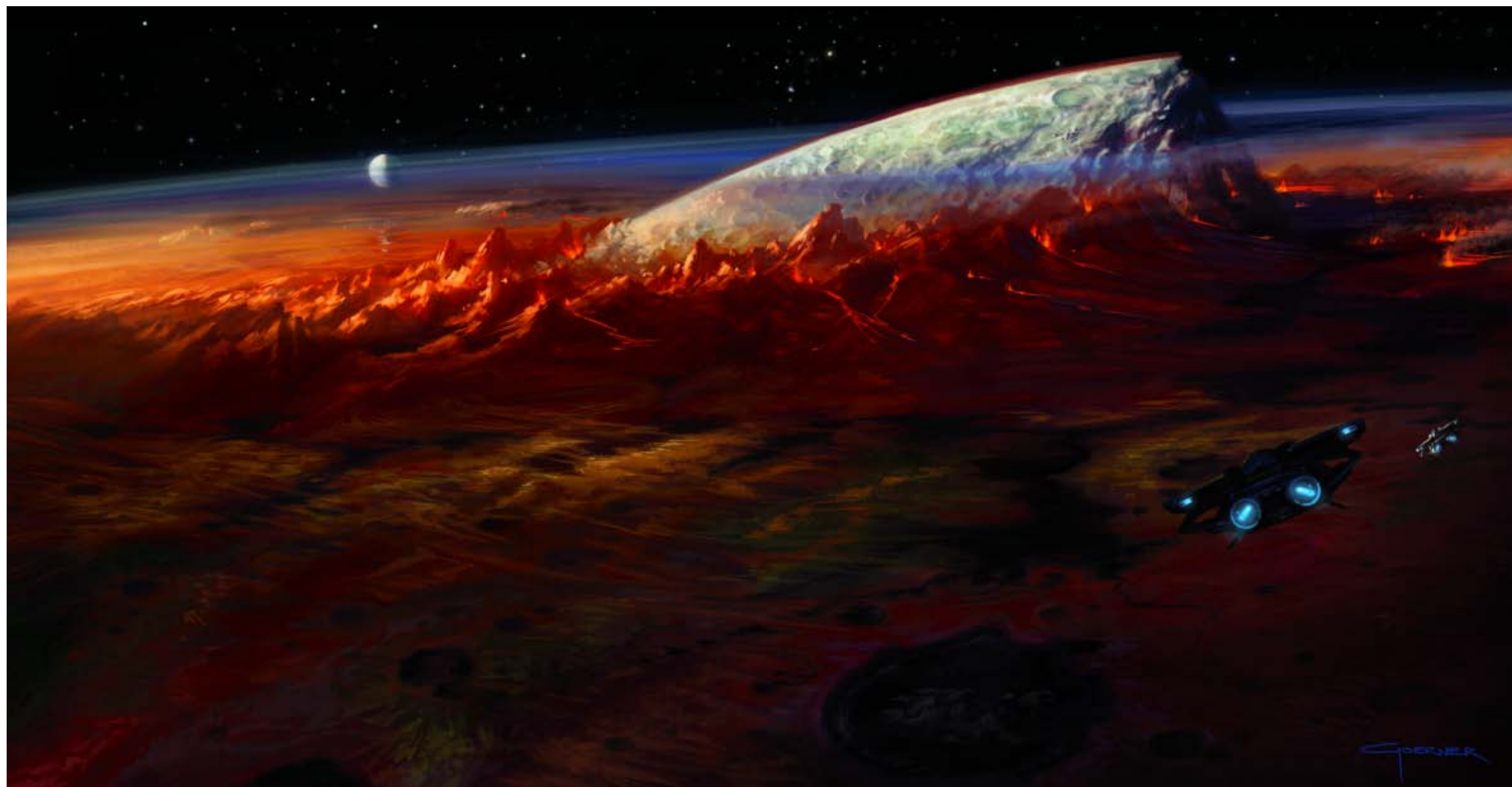
would now be introduced to the planet for the first time, suggesting that the insertion of these elements was the missing component needed for organic life. The three following illustrations show how not only the collision, but the influence of the out-of-reach artifacts left by unknown sources, help fuel and structure the civilization that sprouts from the chaos of the event.

The development of this piece started from a relatively abstract indication using Photoshop directly. Further refinement and adjustment layers of paint inspired me to do a line drawing to confirm the composition. After sketching a small frame, I kept on painting and disregarded that thought. This was one of the first pieces I did without starting on paper, so the concern of establishing guidelines in the program without paper was a convention I learned to break.

## MOON CRASH 1, WINTER



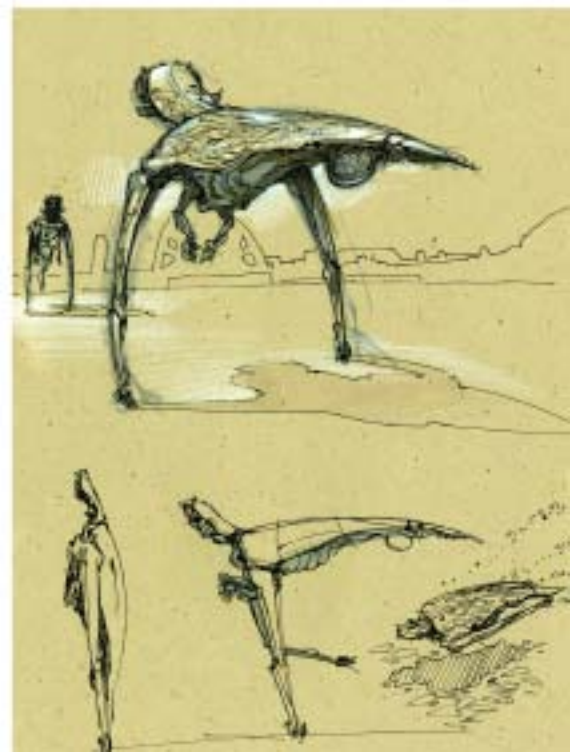












## MOON CRASH 2, SPRING

"Moon Crash 2" represents the time period one million years after the crash, where the large craters and canyons left by the moon fragments become oceans. An atmosphere stabilizes with constant storms, leaving deposits of minerals across the surface of the planet.

Instigated by elements churned up from the initial impact, life begins developing from the recesses of caverns and craters, pushing up the hills, and taking form in complement to the environment. Floating plant forms, composed of bladders of light gases, travel across vast distances leaving spores on the mountainsides. These roving islands and the most evolved species developed a symbiotic relationship which formed the basis of early travel.

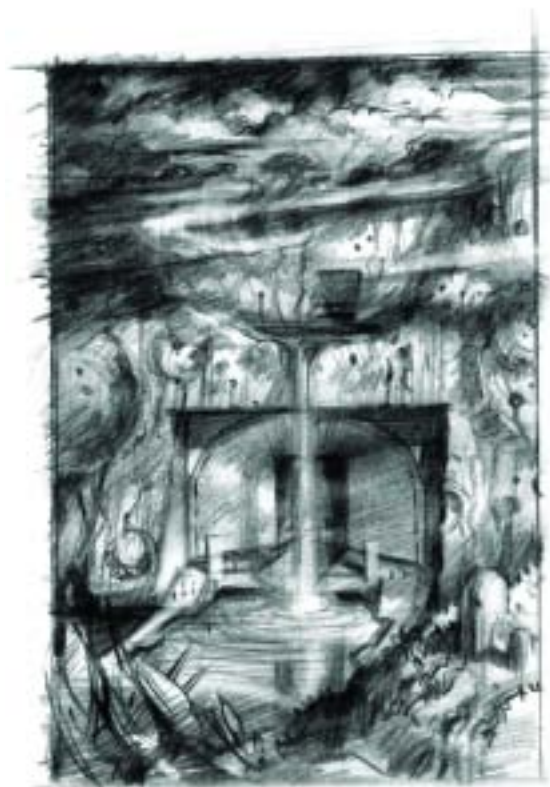
This first conscious species takes inspiration from the distant architecture built on the cap of the lunar mountain outside the atmosphere, and begins to develop its own expression of civilization. At first ceremonial, the architecture begins to reflect patterns of living and a sense of com-

MARK GOERNER:

munity, while always referring to the cryptic compound outside their reach. It is the presence of this compound, and the natural ramp through the atmosphere provided by the lunar mountain that instills the goal to travel beyond their means to make contact with the unknown.

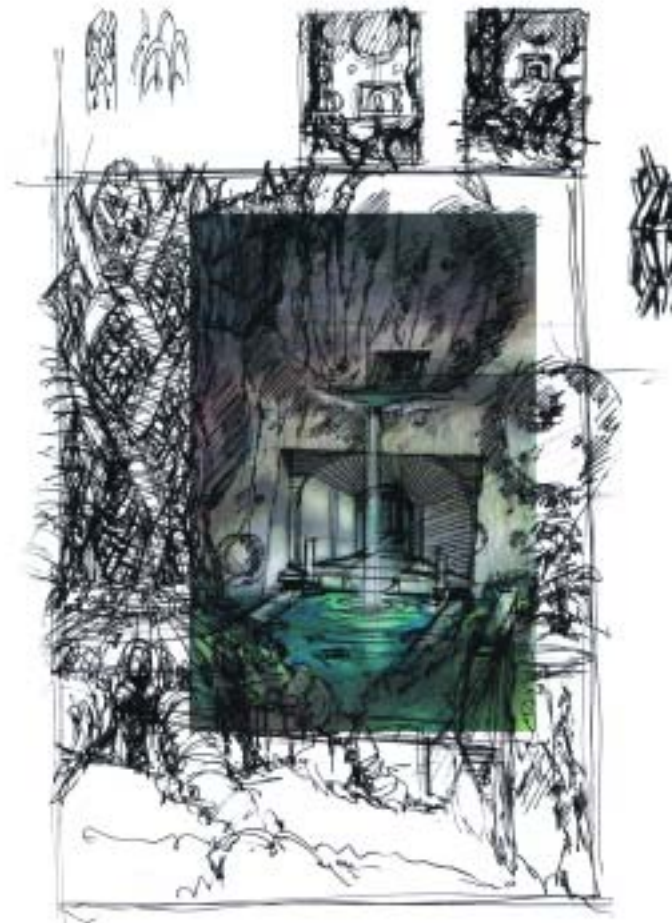
This rendering began in the computer and was at one point a clearly defined vista with a wider format and less pronounced atmosphere. I painted over the top using the existing color palette and basic forms, added the clouds, center monolith, and floating elements along with layers of scribbling to achieve texture. The foreground creatures and ridgeline were unchanged and remained a separate layer that served as a station point for the saturation and tonality of the piece.





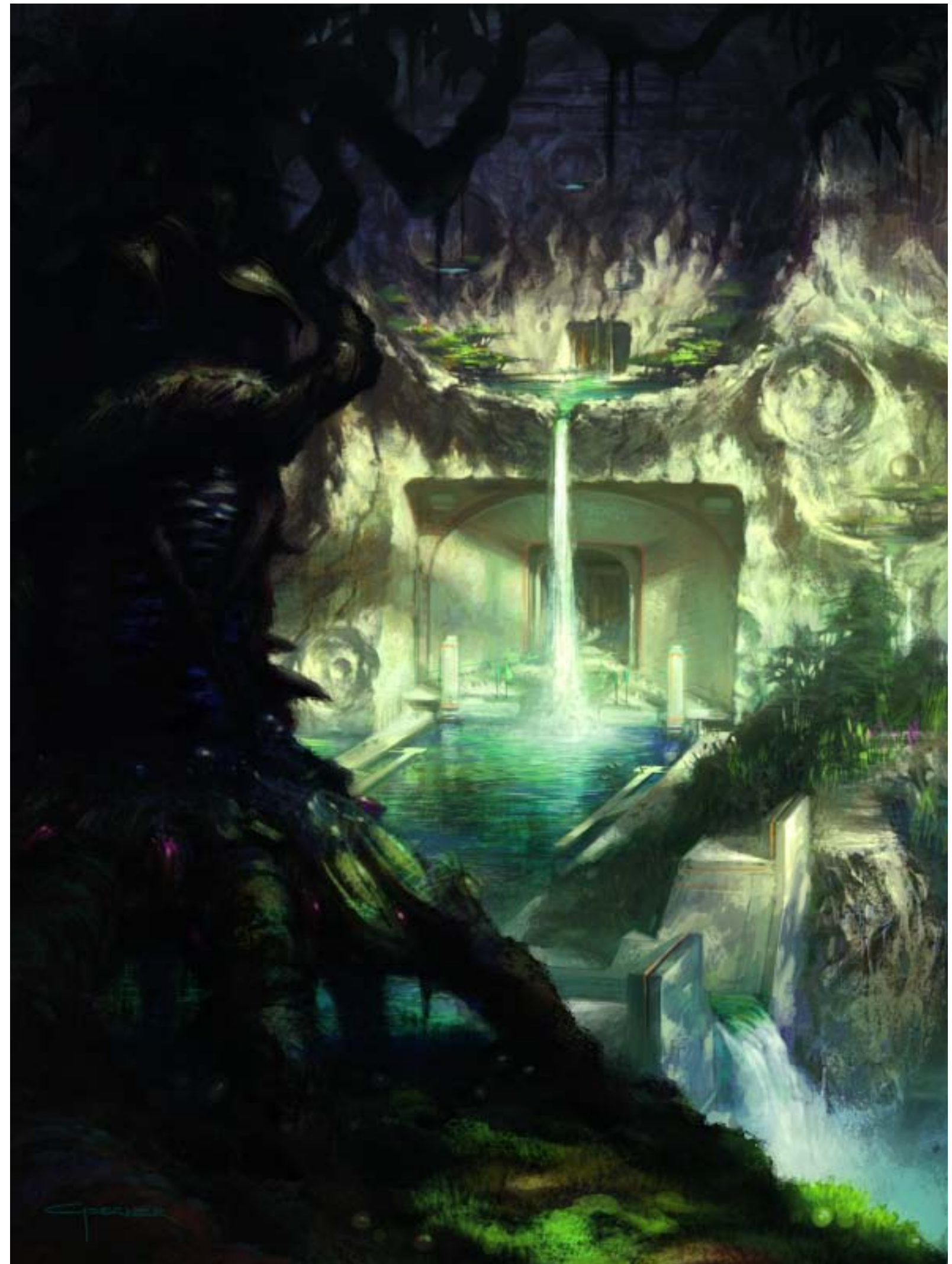
MARK GOERNER:

"Moon Crash 3" represents another span of one million years in the development of the planet, where organic life and the methods of traditional construction and culture for the inhabitants reach their zenith. As they begin to intellectualize the nature and circumstances of the moon's presence on the planet, the society collectively embellishes that intersection with plazas and civic structures. The celebration of environments constructed around the base begin to include catacombs and the scaling of the lunar surface as far as their technology will allow. Being that the goal is to reach outside the livable atmosphere to the summit, this is where their industrial revolution starts, and the age of technological aspiration begins.

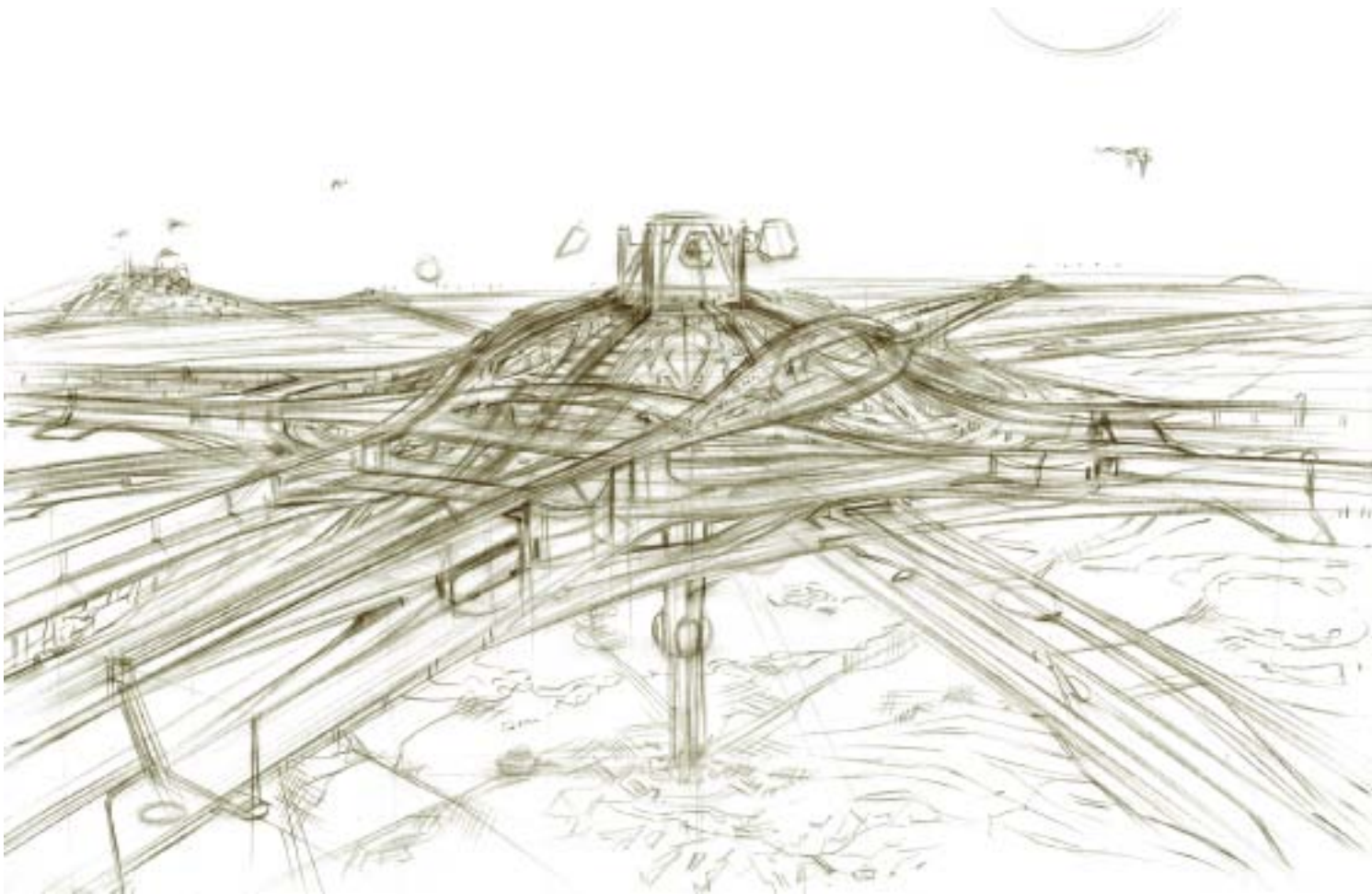


## MOON CRASH 3, SUMMER

This illustration started with the common pencil thumbnail sketch, and after being scanned in, was converted to a multiply layer, and then painted underneath with a solid layer. I printed out a rough to add more detail, and added a foreground environment around the perimeter. I scanned in the modified drawing and painted over the top with essentially one layer, using elements from the scan as an underlay and guide.







MARK GOERNER:

# MOON CRASH 4, AUTUMN

Last in the series, “Moon Crash 4” illustrates the culmination of technology guided by a civilization’s desire to achieve a common goal. Upon reaching the crest of the very lunar mountain that catalyzed their existence, the million-year aspiration to discover the mythological city that was always in sight, but out of reach, finally becomes obtainable. Once there, the site serves as a sober realization that their prowess to venture outside of their habitat was not a first, and that there were other civilizations whose technology was superior.

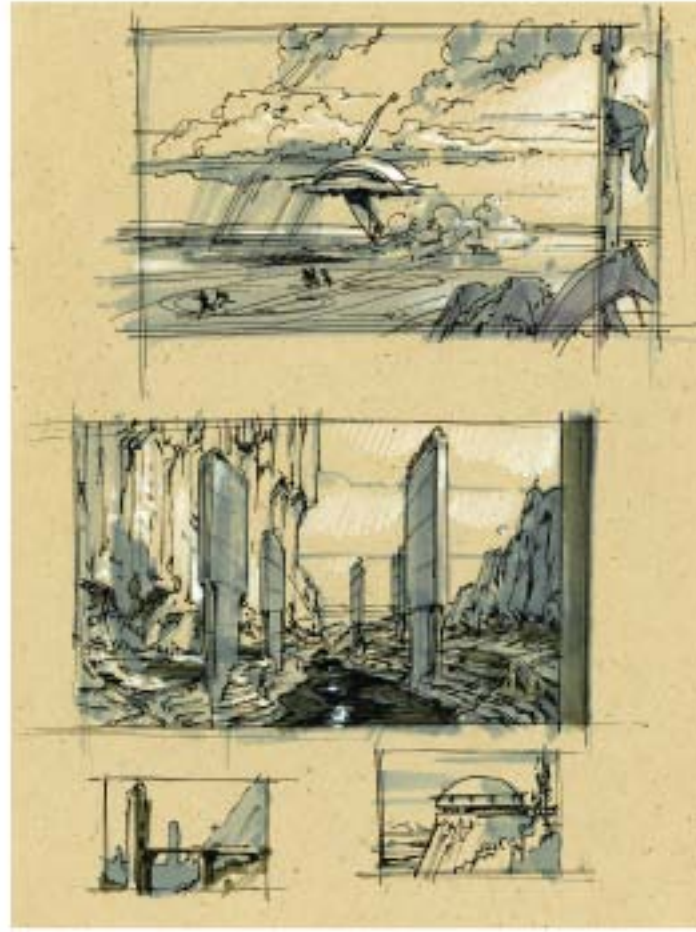
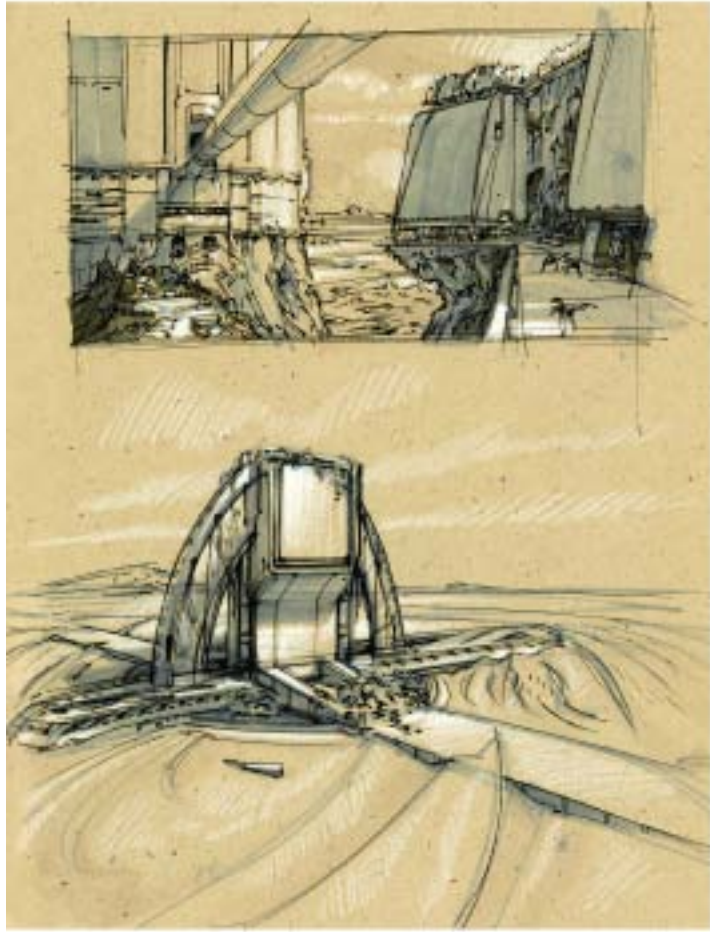
Using one of the mountains as a ramp to reach outside the atmosphere, this indigenous species found the influence of organic life around them to develop a massive web of connecting structures that circumnavigate the planet by using large reservoirs of gases to support them as well providing energy based on barometric changes in the atmosphere. The influence of this lost city gives them the understanding of new ways to build and serves as the springboard for a new

goal; to explore beyond their native sphere and locate the society of strangers that served as the source of their inspiration.

After initial sketches and a finalized drawing that detailed some of the specifics of the design, I began with the planet surface and the location of the sun as a starting point for the color palette and lighting condition. From there I began to paint the hub and its stems, keeping the indication subtle so as not to maintain the sense of scale. From there, I then added consecutive layers of detail to help define the structures, a cloud layer over the planet surface and finally the vehicle.







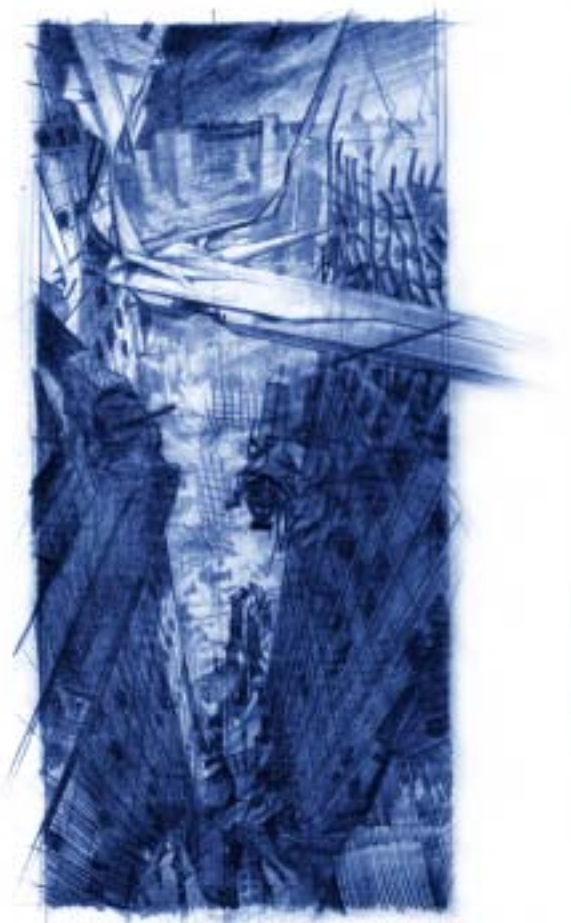
MARK GOERNER:

Based on a love of early civilizations and their cultures, I wanted to do an illustration that expressed an alternate vision of a crossroad's temple. My initial inspiration for this piece was the idea of a landmark defined by astrological orientation, territorial boundaries and trade routes. I find the simplicity and scale of early city grids and monumental architecture to be a great springboard for conceptualizing new forms and spaces. Imagine if Egyptians, Incas, and other progressive builders of the time had developed their metallurgy and foundry skills to include structural steels and modular fasteners. The integration of these materials and processes would certainly have enabled some dynamic forms of expression.

## OASIS THRESHOLD





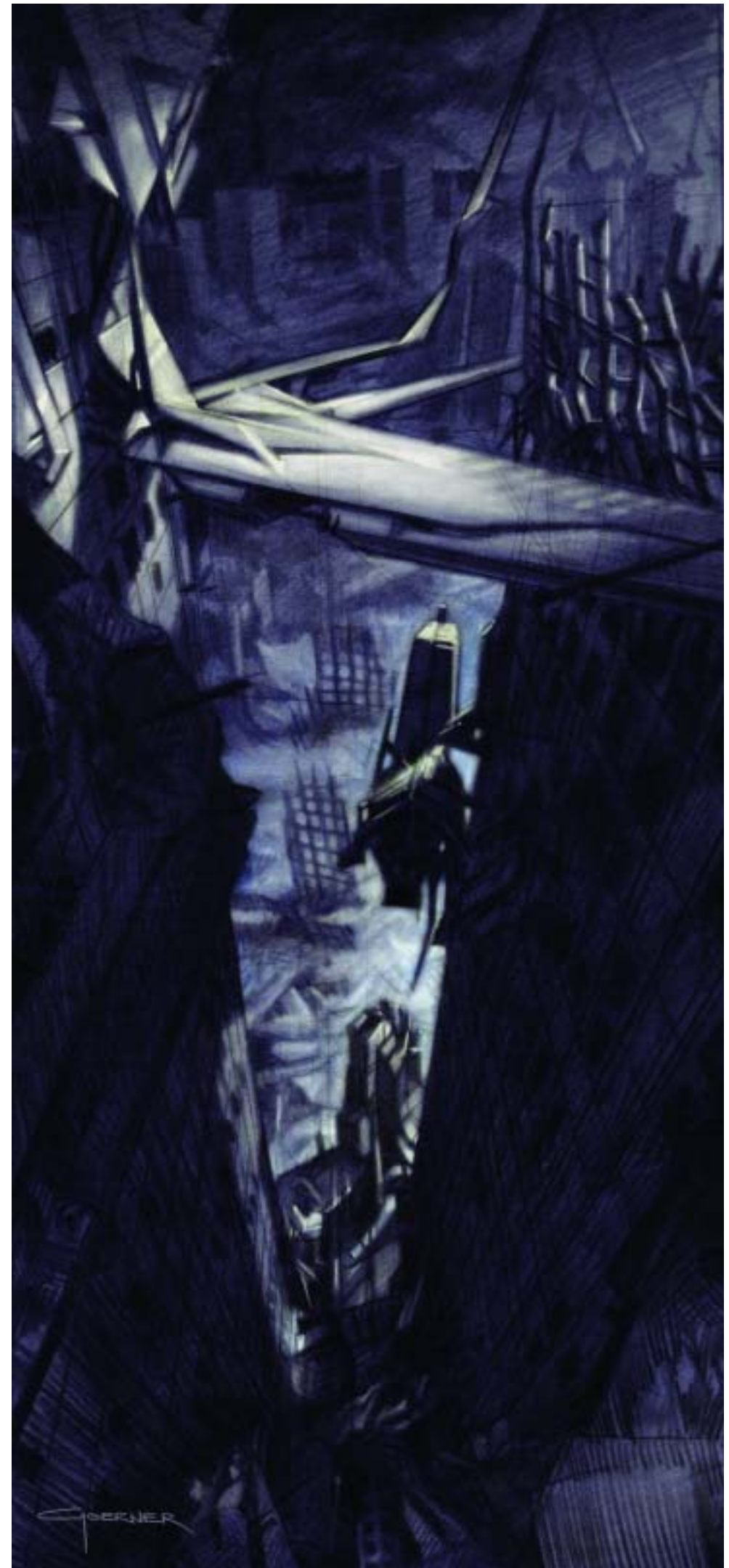


MARK GOERNER:

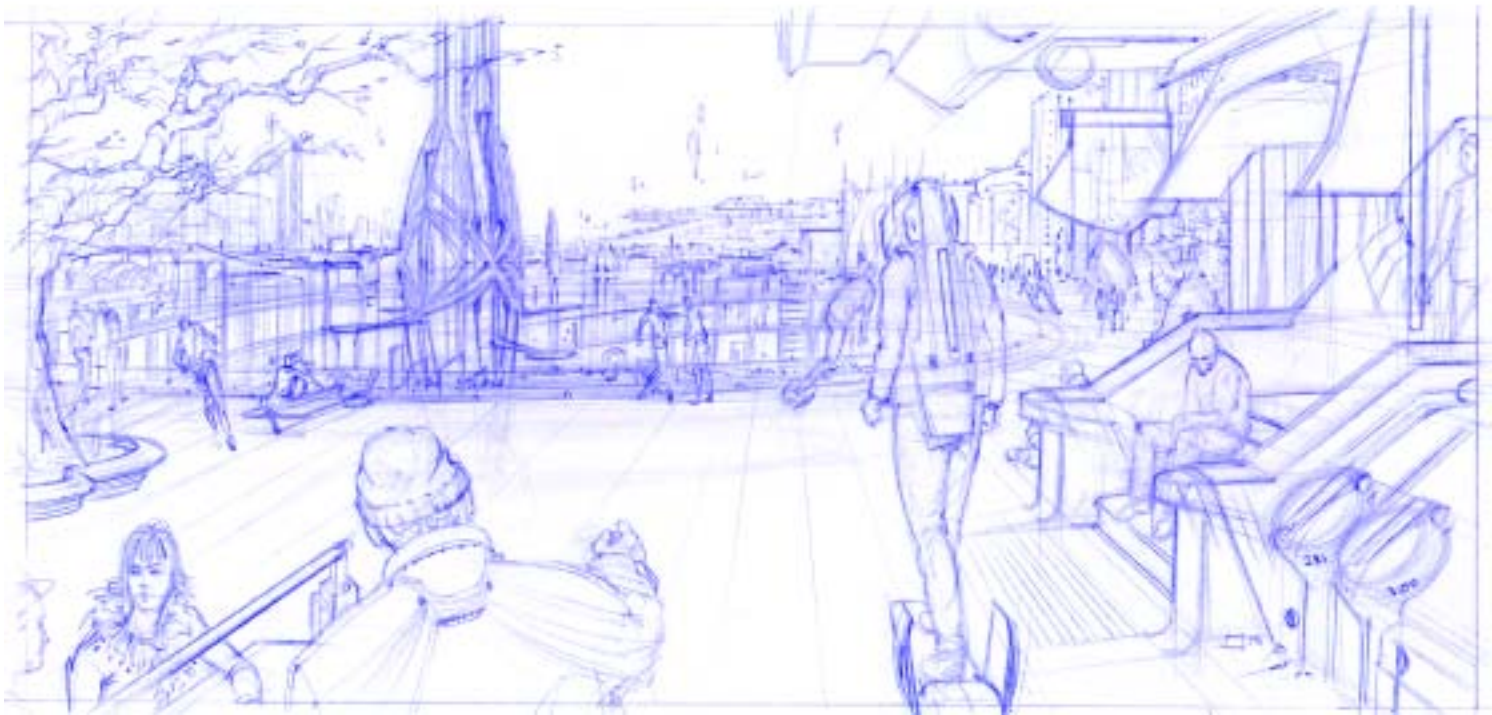
This piece is a reactionary sketch to some of the urban destruction of recent times. Influenced by the silhouettes and skeletal remains of buildings in ruin, I drew this composition with an abstract element connecting buildings like scar tissue on a wound. It was one of those drawings driven by a specific atmosphere and the interest in expressing a contrasting design language.

I would normally take a sketch like this and paint over it to develop a finished painting, but in this case I liked the look of the line work, and just added layers of tint underneath to intensify the contrast and drama.

## RIGOR







MARK GOERNER:

## NEW SOHO KIOSK

A coral reef with a totem pole was the closest parallel I could think of when starting this illustration. I wanted to develop an urban environment with an infrastructure that celebrates the activities of not only street level, but the top, as well as key levels in between. It's about creating a bit more of a matrix of interaction than the traditional ground plane cities operate on. Part of the concept is the treatment of intersections and promenades, a place where social activities and commerce meet. My thoughts were of a central stem free of advertising that serves as functional sculpture for the community to use freely. The Kiosk would also serve as a landmark hub for orientation to define the heart of a specific borough and a communication center that would link other parts of the city as well as the world.

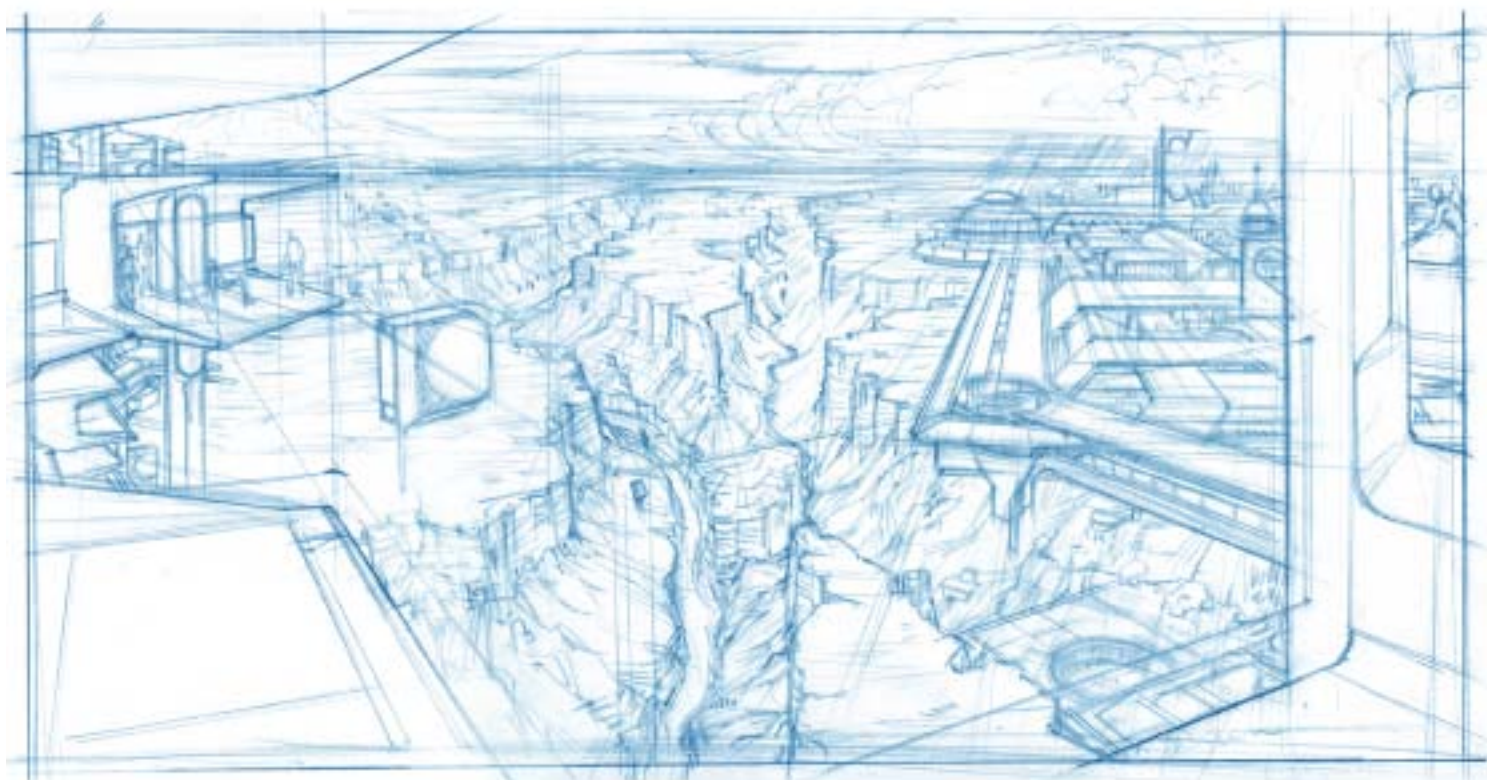












## CANYON SOJOURN

MARK GOERNER:

This piece started with the desire to make an expansive vista that would represent the feeling of being on both the observation deck of a skyscraper and the edge of the Grand Canyon. The cities are floating, self-sustained platforms that travel across the plains without making contact with the ground. Modular observatories linked to their respective condos double as flying vehicles that can travel to distant cities or other parts of the complex.

The concept is to essentially show what could be done with the perfection of lighter-than-air building materials, closed-loop environmental systems, and of course railing-free balconies. The design suggests this society could have the freedom of kinetic architecture that could potentially shift and distort to accommodate changes in lifestyle, like evolved Native American cliff dwellings.

The rendering began by painting in the basic values under the scanned sketch and then breaking foreground, middle ground, and background into separate layers to cre-

ate distinct breaks between the main elements, and to keep the edges clean. The process, like some of the other illustrations I did for this book, closely paralleled the way I paint in gouache; starting first with washes of color to approximate the overall feel, followed by establishing a subtle horizon, then working forward increasing contrast and saturation while always maintaining artifacts from the original line drawing.





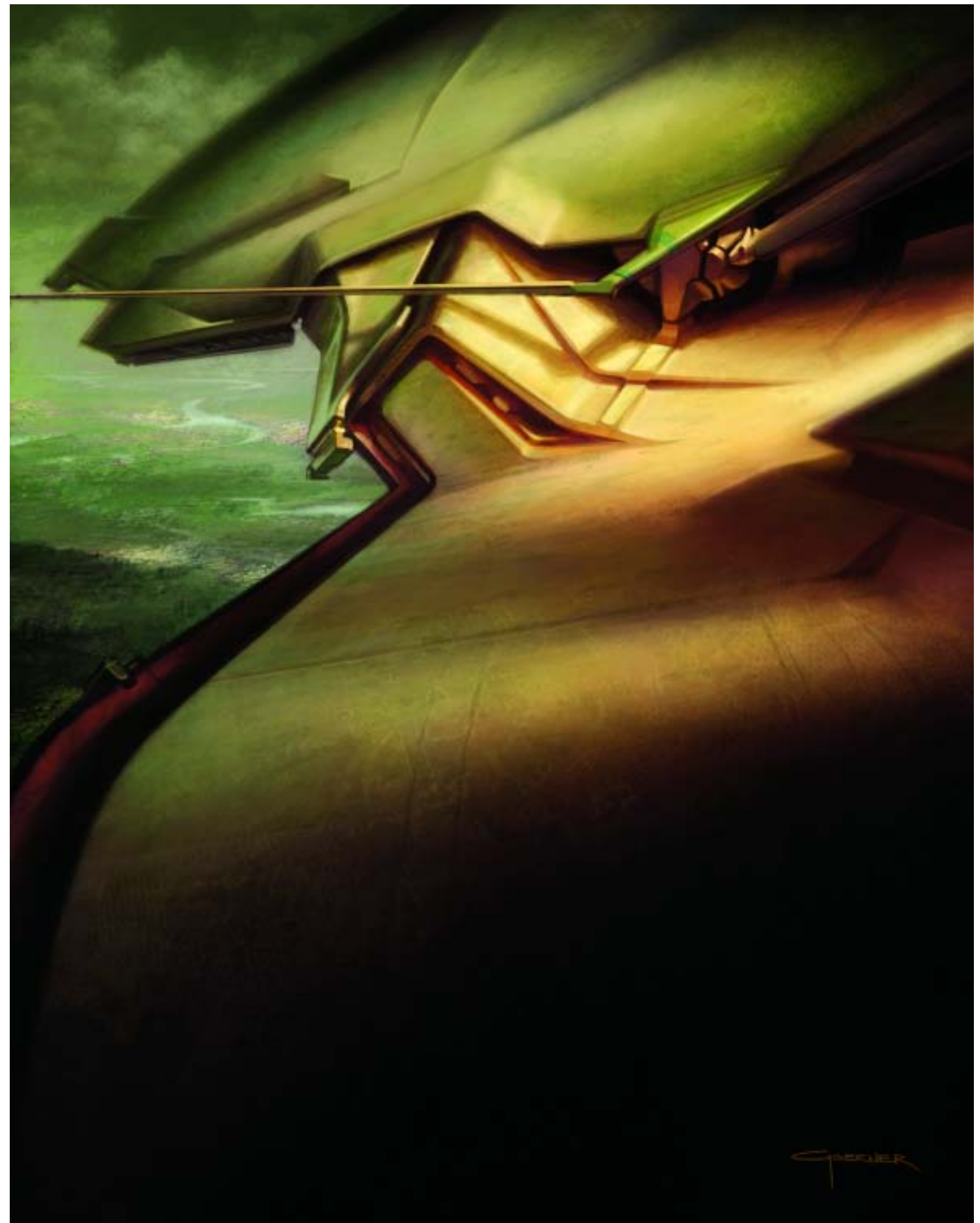
MARK GOERNER:

This illustration started from the same inspiration as one of my previous pieces based on abstract architectural sculpture. While sketching, I focused more attention on a specific design language and compositional energy than an application or function for the forms.

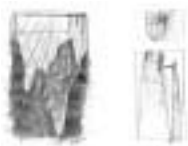
The goal from the start was vague, other than I liked the sketch, and I could stare at it and visualize a specific atmosphere. When I began painting, it quickly became apparent that the image was changing from the initial vision and that a dialog between the piece and myself was taking shape. When this happens, I know I'm probably going in a direction that is worth pursuing.

Even though digital, the feeling of being in the space is something that I shoot for. It is the same experience I used to have when painting with oils in front of a model or still life, the innate connection and craving to embellish the locking of forms, pushing of values, and generating pathways for the eye. It is in those moments when you realize that you are not even conscious of yourself or your tools, and that all you feel like you're doing is buffing a plate glass window to expose what you can already see.

## STALWART WING







artist: James Clyne  
title: LOST CITY - sketches  
media: graphite pencil  
page: 6



artist: James Clyne  
title: LOST CITY  
media: digital  
size: 2664 x 4500 pixels  
page: 7



artist: Harald Belker  
title: MOTOLOLA  
media: Prismacolor pencil + digital  
page: 8



artist: Harald Belker  
title: MOTOLOLA  
media: digital  
size: 4538 x 5756 pixels  
page: 9



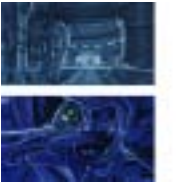
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title: MARIN HEADLANDS  
media: digital  
size: 2635 x 2203 pixels  
page: 12



artist: Nick Pugh  
title: DRUMNALRIG  
media: digital  
size: 2970 x 3905 pixels  
page: 13



artist: Steve Burg  
title: THE FLIERS - sketches  
media: acrylic  
size: top 9" x 5", bottom 6" x 3"  
page: 14



artist: Steve Burg  
title: THE FLIERS  
media: digital  
size: 2970 x 3960 pixels  
page: 15



artist: Neville Page  
title: TO SERVE IT UP AND PROTECT  
media: Prismacolor pencil  
size: 8" x 8"  
page: 16



artist: Mark Goerner  
title: ROUNDABOUT  
media: digital  
size: 4084 x 5453 pixels  
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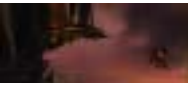
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media: digital  
size: 2385 x 3625 pixels  
page: 24



artist: James Clyne  
title: LASSO STRUCTURE  
media: digital  
size: 2783 x 4163 pixels  
page: 25



artist: James Clyne  
title: HOTEL CANTILEVER  
media: digital  
size: 4455 x 1871 pixels  
page: 27



artist: James Clyne  
title: A PORTRAIT OF BRUCE - sketch  
media: graphite pencil  
size: 3" x 3.5"  
page: 28



artist: James Clyne  
title: A PORTRAIT OF BRUCE  
media: digital  
size: 3548 x 4572 pixels  
page: 29



artist: James Clyne  
title: RING DERELICT  
media: digital  
size: 2490 x 3600 pixels  
page: 31



artist: James Clyne  
title: GREEN MACHINE  
media: digital  
size: 5074 x 1859 pixels  
page: 33



artist: James Clyne  
title: ABOVE THE OIL FIELDS - sketches  
media: graphite pencil  
page: 34



artist: James Clyne  
title: ABOVE THE OIL FIELDS  
media: digital  
size: 3960 x 2059 pixels  
page: 35



artist: James Clyne  
title: DEPARTURE ON A NUVANIAN WORMTRAIN  
media: digital  
size: 4785 x 2227 pixels  
page: 37



artist: James Clyne  
title: A POSSIBLE WRONG TURN  
media: digital  
size: 4980 x 1972 pixels  
page: 39



artist: James Clyne  
title: LUNAR TERRAFORMING OPERATION  
media: digital  
size: 5393 x 2705 pixels  
page: 40



artist: James Clyne  
title: NEW THAILAND  
media: digital  
size: 2746 x 3825 pixels  
page: 43



artist: Harald Belker  
title: AUTOMOTIVE LINES - sketches  
media: Prismacolor pencil  
page: 46



artist: Harald Belker  
title: AUTOMOTIVE LINES  
media: Prismacolor pencil + digital  
page: 47



artist: Harald Belker  
title: FEMME  
media: digital  
size: 1695 x 2683 pixels  
page: 48



artist: Harald Belker  
title: FEMME  
media: digital  
size: 2599 x 4163 pixels  
page: 49



artist: Harald Belker  
title: DUDE  
media: digital  
size: 3200 x 2691 pixels  
page: 50



artist: Harald Belker  
title: DUDE  
media: digital  
size: 3300 x 4296 pixels  
page: 51



artist: Harald Belker  
title: RANDOMNESS  
media: digital  
size: 3859 x 2039 pixels  
page: 52



artist: Harald Belker  
title: RANDOMNESS  
media: digital  
size: 2672 x 3713 pixels  
page: 53



artist: Harald Belker  
title: FUTURE EXECUTIVE POWER  
media: Ink pen  
size: 11" x 14"  
page: 54



artist: Harald Belker  
title: FUTURE EXECUTIVE POWER  
media: digital  
size: 4950 x 4267 pixels  
page: 55



artist: Harald Belker  
title: FLYING SHEET METAL  
media: digital  
size: 1666 x 2534 pixels  
page: 56



artist: Harald Belker  
title: FLYING SHEET METAL  
media: Prismacolor pencil + digital  
size: 3053 x 3646 pixels  
page: 57



artist: Harald Belker  
title: HELICOPTER UNDER BRIDGE  
media: digital  
size: 3280 x 4388 pixels  
page: 59



artist: Harald Belker  
title: FANTASY  
media: Ink pen  
size: 8.5" x 11"  
page: 60



artist: Harald Belker  
title: FANTASY  
media: digital  
size: 2475 x 3145 pixels  
page: 61



artist: Harald Belker  
title: FIRE ENGINE  
media: digital  
size: 5644 x 2723 pixels  
page: 63



artist: Harald Belker  
title: ROBOTICA  
media: digital  
size: 5395 x 3100 pixels  
page: 64



artist: Harald Belker  
title: ROBOTICA  
media: Ink pen  
size: 8" x 11"  
page: 65



artist: Scott Robertson  
title: L.T. VEHICLES  
media: digital  
size: 3300 x 1900 pixels  
page: 69



artist: Scott Robertson  
title: L.T. VEHICLES  
media: digital - PAINTER 7.0  
size: 3300 x 1976 pixels  
page: 69



artist: Scott Robertson  
title: BOYHOOD DREAMS  
media: digital  
size: 3333 x 1978 pixels  
page: 70



artist: Scott Robertson  
title: BOYHOOD DREAMS  
media: digital  
size: 2475 x 3375 pixels  
page: 71



artist: Scott Robertson  
title: BEACH SALVAGE  
media: digital  
size: 1666 x 891 pixels  
page: 72



artist: Scott Robertson  
title: SNEAKY BOT  
media: digital  
size: 2475 x 2980 pixels  
page: 73



artist: Scott Robertson  
title: OVER THE PASS  
media: marker + ink pen  
size: average 2" x 3" each  
page: 74



artist: Scott Robertson  
title: OVER THE PASS  
media: digital  
size: 1000 x 1500 pixels each  
page: 75



artist: Scott Robertson  
title: OVER THE PASS  
media: digital  
size: 3300 x 2262 pixels  
page: 75



artist: Scott Robertson  
title: BOATS, BOATS, BOATS  
media: Prismacolor pencil + Nupastel chalk + gouache on vellum  
size: approx. 6" x 12" each  
page: 77



artist: Scott Robertson  
title: PIT STOP - sketches  
media: marker + ink pen  
size: approx. 3" x 4" each  
page: 78



artist: Scott Robertson  
title: PIT STOP  
media: digital  
size, top two: 1301 x 1769 pixels  
size, bottom: 3267 x 2465 pixels  
page: 79



artist: Scott Robertson  
title: HANGAR 51  
media: digital  
size: 3201 x 3335 pixels  
page: 80



artist: Scott Robertson  
title: HANGAR 47  
media: digital  
size: 2603 x 3600 pixels  
page: 81



artist: Scott Robertson  
title: LOS AERODESLIZADORES  
media: digital  
size: 4731 x 2261 pixels  
page: 85



artist: Scott Robertson  
title: UNDERPASS  
media: digital  
size: 4988 x 2793 pixels  
page: 86



artist: Scott Robertson  
title: RETURNING TO HEADQUARTERS  
media: digital  
size: 2584 x 3881 pixels  
page: 89



artist: Nick Pugh  
title: ARCHICURVE  
media: digital  
size: 1966 x 3004 pixels  
page: 93





artist: Nick Pugh  
title: ARCHICURVE 2  
media: digital  
size: 1321 x 1991 pixels  
page: 95



artist: Nick Pugh  
title: GEO-ARCHITECTURAL SPACES  
media: digital + ink pen  
size color sketch: 1878 x 2683 pixels  
size: line sketches: 8.5" x 11" each  
page: 96



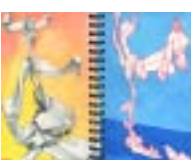
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title: CLOUDCAR  
media: Prismacolor pencil  
size: 3" x 18" each  
page: 98



artist: Nick Pugh  
title: CLOUDCAR  
media: Prismacolor pencil + marker  
size: 18" x 24"  
page: 99



artist: Nick Pugh  
title: WINDING POLYP TRUSS FORMATIONS  
media: Prismacolor pencil + gouache  
size: 6" x 9" each  
page: 106



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title: WINDING POLYP TRUSS FORMATIONS  
media: digital  
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page: 107



artist: Nick Pugh  
title: EXPANDING HYPERBOLIC PERSPECTIVE  
media: digital  
size: 2888 x 2284 pixels  
page: 109



artist: Nick Pugh  
title: CONCEPT PAINTINGS  
media: oil  
size: 18" x 24"  
page: 111



artist: Nick Pugh  
title: INTERSPACIAL SUBSTRUCTURE DYNAMICS  
media: digital  
size: top, 3016 x 1372 pixels  
size: bottom, 3016 x 1476 pixels  
page: 112



artist: Nick Pugh  
title: INTERSPACIAL SUBSTRUCTURE DYNAMICS  
media: digital  
size: 4399 x 2839 pixels  
page: 113



artist: Nick Pugh  
title: THE PERSONAL CONCEPT CAR  
media: photographs of XENO 3  
media: digital R. Coppola vehicle  
size: 2172 x 1012 pixels  
page: 114



artist: Steve Burg  
title: IN THE YARDS  
media: mixed digital  
size: 2888 x 3850 pixels  
page: 119



artist: Steve Burg  
title: GATEWAY  
media: digital  
size: 3135 x 3919 pixels  
page: 121



artist: Steve Burg  
title: PRELUDE  
media: mixed digital  
size: 3000 x 4500 pixels  
page: 123



artist: Steve Burg  
title: AFTERMATH  
media: mixed digital  
size: 3100 x 2068 pixels  
page: 124



artist: Steve Burg  
title: TIME PILOTS  
media: acrylic  
size: 7" x 10"  
page: 127



artist: Steve Burg  
title: ICE  
media: acrylic  
size: 28" x 20"  
page: 128



artist: Steve Burg  
title: ICE  
media: digital  
size: 2970 x 3960 pixels  
page: 129



artist: Steve Burg  
title: DAWN ON RAIIS-TANNIBRAE  
media: digital  
size: 5312 x 3541 pixels  
page: 131



artist: Steve Burg  
title: NOMADS  
media: digital  
size: 4980 x 2988 pixels  
page: 132



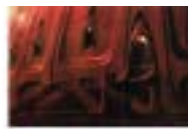
artist: Steve Burg  
title: THE DERELICT  
media: acrylic  
sizes: top, 20" x 15", bottom left 7" x 5",  
bottom right 7" x 5"  
page: 135



artist: Steve Burg  
title: THRESHOLD  
media: acrylic  
sizes: top, 9" x 6", bottom 9" x 6"  
page: 137



artist: Steve Burg  
title: THRESHOLD  
media: acrylic  
sizes: top, 9" x 6", bottom 9" x 6"  
page: 137



artist: Steve Burg  
title: SCIENCE FICTION IMAGES  
media: acrylic  
sizes: top, 15" x 10", bottom 6" x 4"  
page: 139



artist: Steve Burg  
title: SCIENCE FICTION IMAGES  
media: acrylic  
sizes: top, 15" x 10", bottom 6" x 4"  
page: 139



artist: Neville Page  
title: CHARLES  
media: digital  
size: 4125 x 5304 pixels  
page: 143



artist: Neville Page  
title: FIRE PUMPS  
media: Prismacolor pencil  
size: 11" x 14"  
page: 144



artist: Neville Page  
title: FIRE PUMPS  
media: digital  
size: 4125 x 3831 pixels  
page: 145



artist: Neville Page  
title: GREAT WHITE SMILE  
media: digital  
size: 2970 x 2566 pixels  
page: 147



artist: Neville Page  
title: "AND TO YOU RIGHT..."  
media: digital  
size: 2499 x 3938 pixels  
page: 149



artist: Neville Page  
title: SQUID  
media: digital  
size: 4680 x 2960 pixels  
page: 151



artist: Neville Page  
title: NAUTILUS  
media: digital  
size: 4482 x 2390 pixels  
page: 152



artist: Neville Page  
title: SEA BEE  
media: digital  
size: 3176 x 4331 pixels  
page: 155



artist: Neville Page  
title: TORPEDO  
media: Prismacolor pencil  
size: 9" x 14"  
page: 156



artist: Neville Page  
title: TORPEDO  
media: digital  
size: 4076 x 4146 pixels  
page: 157



artist: Neville Page  
title: THINKN' HARD  
media: digital  
size: 2103 x 3825 pixels  
page: 159



artist: Neville Page  
title: WHAT THE...  
media: digital  
size: 3135 x 4172 pixels  
page: 161



artist: Neville Page  
title: ARACHNOMORPHIA  
media: Prismacolor pencil  
sizes: range from 2" x 2" to 14" x 17"  
page: 162



artist: Neville Page  
title: ARACHNOMORPHIA  
media: mixed, Prismacolor pencil  
+ digital  
size: 3878 x 5288 pixels  
page: 163



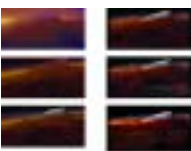
artist: Mark Goerner  
title: TORBERNITE CATHEDRAL  
media: Prismacolor pencil  
sizes: range from 1" x 3" to 3" x 9"  
page: 166



artist: Mark Goerner  
title: TORBERNITE CATHEDRAL  
media: digital  
size: 2930 x 5456 pixels  
page: 167



artist: Mark Goerner  
title: JUGGERNAUT  
media: digital  
size: 3927 x 5400 pixels  
page: 169



artist: Mark Goerner  
title: MOON CRASH 1, WINTER  
media: digital  
size: 1400 x 670 pixels each  
page: 170



artist: Mark Goerner  
title: MOON CRASH 1, WINTER  
media: digital  
size: 5478 x 2830 pixels  
page: 171



artist: Mark Goerner  
title: MOON CRASH 2, SPRING  
media: digital  
size: 5478 x 2513 pixels  
page: 172



artist: Mark Goerner  
title: MOON CRASH 2, SPRING  
media: ink pen and white  
Prismacolor pencil  
page: 173



artist: Mark Goerner  
title: MOON CRASH 2, SUMMER  
media: digital  
size: 4043 x 5445 pixels  
page: 175



artist: Mark Goerner  
title: MOON CRASH 2, AUTUMN  
media: Prismacolor pencil  
size: 9" x 14"  
page: 176



artist: Mark Goerner  
title: MOON CRASH 2, AUTUMN  
media: digital  
size: 4315 x 5500 pixels  
page: 177



artist: Mark Goerner  
title: OASIS THRESHOLD  
media: ink pen and white Prismacolor pencil  
size: 8.5" x 11" each  
page: 178



artist: Mark Goerner  
title: OASIS THRESHOLD  
media: digital  
size: 5445 x 4384 pixels  
page: 179



artist: Mark Goerner  
title: RIGOR  
media: mixed, Prismacolor pencil + digital  
size: 2484 x 5456 pixels  
page: 181



artist: Mark Goerner  
title: NEW SOHO KIOSK  
media: Prismacolor pencil  
size: top, 1" x 3", bottom 7" x 14"  
page: 182



artist: Mark Goerner  
title: NEW SOHO KIOSK  
media: digital  
size: 5478 x 2611 pixels  
page: 183



artist: Mark Goerner  
title: CANYON SOJOURN  
media: digital  
size: 5063 x 2586 pixels  
page: 184



artist: Mark Goerner  
title: CANYON SOJOURN  
media: Prismacolor pencil  
size: 6" x 11"  
page: 185



artist: Mark Goerner  
title: STALWART WING  
media: digital  
size: 4331 x 5471 pixels  
page: 187



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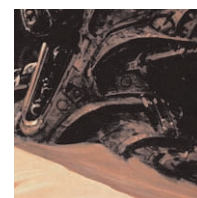
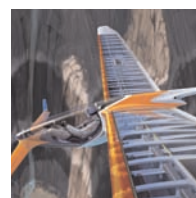
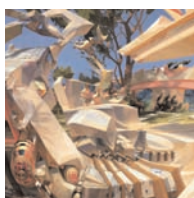
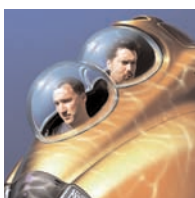
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